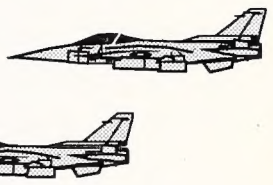
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FINAL ENVIRONMENTAL IMPACT STATEMENT FOR THE COLORADO AIRSPACE INITIATIVE

VOLUME III – Public Comments on the Draft EIS Received by Mail





August 1997

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FINAL ENVIRONMENTAL IMPACT STATEMENT FOR THE COLORADO AIRSPACE INITIATIVE

VOLUME III -- Public Comments on the Draft EIS Received By Mail

Air National Guard
National Guard Bureau
Andrews Air Force Base, Maryland

August 1997

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VIII
999 18th STREET - SUITE 500
DENVER, COLORADO 80202-2466

MAY 16 1996

Ref: 8P2-A

Air National Guard Readiness Center
Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews Air Force Base, MD 20762-5157

Dear Program Manager:

My staff has reviewed the air quality analysis performed for the Colorado Airspace Initiative DEIS and has the following comments.

An EPA "Guideline" air quality dispersion model was not used to assess the potential impacts from this project. However, my staff believes that all air quality impacts have been addressed and are expected to be minimal.

Should you have any additional questions or comments, please contact Shawn McCaffrey of my staff at (303) 312-6883.

Sincerely,

Richard R. Long
Director
Air Program

001G Richard R. Long

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

United States Department of Agriculture | Forest Service | Arapaho and Roosevelt National Forests Pawnee National Grassland | 240 West Prospect Road Fort Collins, CO 80526-2098 Phone: (970) 498-1100 FAX: (970) 498-1010

Reply to: 1950

Date: May 23, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

Dear Sir/Madam:

Upon review of the Draft Environmental Impact Statement for the Colorado Airspace Initiative, there is no significant change to the use of the airspace which occurs either on the Pawnee National Grassland or the Roosevelt National Forest (Redfeather District). For this reason I find that the Arapaho and Roosevelt National Forests and Pawnee National Grassland have no adverse comments to the impact analyses. 1

Sincerely,

for Don Bright
M. M. UNDERWOOD, JR.
Forest Supervisor

002O M.M. Underwood

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
Denver Federal Center, Building 56, Room 1003
P.O. Box 25007 (D-108)
Denver, Colorado 80225-0007

May 30, 1996

ER 96/216

Air National Guard Readiness Center
Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews Air Force Base, MD 29762-5157

Dear Sir:

This responds to the request for the Department of the Interior's comments on the draft Environmental Impact Statement (DEIS) for the Colorado Airspace Initiative (CAI), Colorado, New Mexico, Kansas, Nebraska, and Wyoming.

GENERAL COMMENTS

Scoping Process

The final Environmental Impact Statement (FEIS) should contain a more thorough explanation of comments received during scoping and how they were dealt with in the development of the EIS. Several of the National Park Service (NPS) concerns identified during scoping were not adequately addressed in the EIS. In addition to the need for an analysis pursuant to Section 4(f) of the Department of Transportation Act, NPS also pointed out that natural quiet is an intrinsic value in park lands that is just as valuable as clean air or clean water. 1, 2

Compliance of Aircraft with Restrictions

Compliance with minimum altitudes and boundaries of MOAs and MTRs is a major concern to the Department of Interior. Both were routinely ignored in the San Luis Valley before the controversy over this proposal. Direct low level overflight of the main visitor use area at Great Sand Dunes National Monument (NM) was frequent, although this has never been approved military training space. In spite of numerous complaints, problems continued. 3, 4

Since the public controversy over Project Redeye/Colorado Airspace Initiative began, compliance has been extremely good. In addition, it appears that use of VR-413 has been sharply reduced. This may give a false impression of the conditions that will exist if the Preferred Alternative is approved and implemented. Based on past experience, we are concerned, after 5

RESPONSES TO COMMENTS

Response to Comment No.1

An analysis pursuant to section 4(f) of the Department of Transportation Act is not required for these airspace proposals. By its terms, section 4(f) applies only to "transportation" projects. This section was intended to keep new projects for roads, railroads, and airports - the purpose of which are to facilitate the transport of goods or people - from interfering with established parks and recreation areas as much as possible. By contrast, special use airspace is established for other than transportation purposes. Examples of military activities performed in special use airspace include aircraft testing, training in air combat tactics, aerobatics, formation flying, bombing, and gunnery. The creation or modification of airspace for military training or testing is not a "transportation" project within the meaning of the statute.

Response to Comment No.2

The concept of natural quiet as a resource has been added to the Final EIS. This new discussion may be found in Subsection 4.14.

Response to Comment No.3

The ANG takes the public's concerns about pilot accountability very seriously. Any misconduct by a military pilot is a serious matter. If a member of the public is experiencing any problems with the military's operations in any of the airspace in an area that affects a person directly, the public affairs officer at the nearest military installation should be contacted immediately, or call (800) 582-8507.

The Federal Aviation Administration and each military service have very strict rules to ensure pilots stay within defined training airspace. The rules govern minimum altitudes, maximum speed, and type maneuvers that can be performed inside and outside designated training airspace. Military commanders have the authority to suspend pilots who willfully violate flight rules, such as flying outside designated training airspace. The military closely manages the airspace they use to ensure they do not exceed planned parameters.

approval, compliance will again be very lax and the actual increase in flights compared to the past 4 years could be several hundred percent instead of the 76 percent shown in the Preferred Alternative.

The FEIS should recognize that pilot compliance with restrictions is not 100 percent, and the effects to areas adjacent to MOAs and MTRs should be analyzed in depth. The final EIS should also describe what mechanism will be put in place to assure future compliance with established altitudes and boundaries. 6

Air Traffic Conflicts

The CAI will undoubtedly have some impact on future Fire and Aviation missions of the Bureau of Land Management (BLM), Canon City District. Specifically, the direct impact on their program will largely be due to the dramatic increase in the number of military aircraft missions or "sorties" which will be utilizing Military Training Route VR-413.

Under the proposal, MTR VR-413 will experience an increase in scheduled sorties from 100 to 176 annually. MTR VR-413 falls into portions of both the Royal Gorge and the San Luis Resource areas of the Canon City District. Historically, the District has experienced a small number of wildfires which required suppression aircraft within the boundaries of the current VR-413, 2nd Airburst A MOA.

Additionally, the District conducts an annual Wilderness Study Area (WSA) aerial surveillance flight which intersects and parallels the existing VR-413 route. The proposed version of VR-413 will also be in the same general flight route as our annual WSA flight. Our concern is centered around the increase in military flights in these areas, and what steps can we take to eliminate the hazards when conducting our limited aircraft operations within this Military Training Route. 7

The Interagency Airspace Coordination Guide, which is used by the Colorado BLM dispatch organization, provides the protocol and procedures for coordinating the use of the affected airspace within any MTR and/or MOA. The aviation manager/dispatcher would have to invest a certain amount of time in planning, scheduling and coordinating with the Air National Guard (Guard) and the Federal Aviation Administration (FAA) before any BLM operated or controlled aircraft could enter the airspace within a MTR and/or MOA. This airspace "deconfliction" is required for all BLM aviation operations before any aircraft associated with a BLM mission can enter this special use airspace. The time required for planning, scheduling and coordinating would vary depending upon the complexity of and the duration of each individual BLM aviation operation within the airspace of the MTR and/or MOA.

Response to Comment No.4

Since its inception, the toll-free number (800) 582-8507 has helped the ANG to monitor and reduce the number of aircraft noise complaints. All calls to the number are taken seriously regardless of how the caller characterizes the complaint. If callers are not satisfied with the 800-number service, experience future problems with the toll-free number, or feel they are not getting a timely response, an alternative is to call the 140 WG Commander at (303) 340-9555.

Response to Comment No.5

The frequency of training flights that have been observed by the public represent normal operations needed to fulfill USAF training requirements.

Response to Comment No.6

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.7

On-going education and awareness programs make military and civilian pilots aware of each other's operations. Safe separation procedures can be devised through coordination with the 140 WG to prevent any conflicts among their respective activities. Visual flight rules add further safeguards for elimination of potential conflicts with hang gliders and hot air balloonists.

Integral to the Air National Guard's emphasis on and participation in education and awareness programs is its participation in the Interagency Airspace/Natural Resources Coordination Group. Several BLM and USDA-Forest Service members responsible for fire fighting coordination participate in this group. This group emphasizes coordination with and cooperation through airspace and land managers. Because of this group, the Air National Guard is very familiar with the Interagency Airspace Coordination Guide.

The EIS assessed the potential conflicts between operations of military and civilian aircraft at airports, along air routes, and in other operational areas. It was determined that there are no major conflicts with local operations that cannot be made safe through continuous education and awareness programs. Military pilots of the 140 WG and transient pilots who fly the airspace for which the 140 WG has scheduling and management responsibility are made aware of local operations such as crop dusting, airports, and airways. These awareness programs, along with FAA restrictions to remain at least 1,500 feet above or three miles laterally from airports, should ensure safe operations with minimum disruptions to military and civilian aircraft.

Program Manager, CAI EIS 3

National Park Service Units

The CAI has the potential to impact three NPS areas in the State of Colorado: Bent's Old Fort National Historic Site (NHS), Florissant Fossil Beds National Monument (NM) and Great Sand Dunes NM. However, it was difficult to read the military airspace map (page F-65), and a better map could make effects to other NPS areas in Colorado apparent. It appears that VR-413 may impact Florissant Fossil Beds NM. Figure 4-28 locates the National Monument outside the route, but the Monument is not shown on other VR-413 maps. Bent's Old Fort NHS would be impacted by any increase in use of IR-177/501 that may result from the establishment of the Two Buttes MOA. In addition, although IR-177/501 leads directly into the proposed Two Buttes MOA, there is no discussion of any associated uses. Even though IR-177/501 will not be used by the 140th Wing, the use of the new MOA via IR-177/501 should be addressed in the FEIS. This is essential to allow NPS to determine potential impacts to Bent's Old Fort NHS. The FEIS maps should show all NPS areas and should contain better location references, preferably section lines, and NPS should be consulted again regarding impacts to their lands. 8 9

With the elimination of the Dunes MOA, the narrowing of VR-413, reduced sorties in the La Veta MOA and the 2,000-foot AGL policy over wilderness areas, the potential adverse impacts to Great Sand Dunes NM are greatly reduced. The efforts by the Guard to protect this unique national treasure are appreciated. 10

Effects on Natural Quiet

Although the Preferred Alternative would eliminate direct overflights of NPS areas, there will still be a significant impact on the visitor experience in the parks. A major reason for visiting NPS areas is viewing natural scenery and, in fact, a recent study found 93.2 percent of visitors surveyed found this an important reason. The same study found that almost as many visitors (90.7 percent) considered the opportunity to enjoy natural quiet an important reason for visiting the parks. The study also found that seeing aircraft is as annoying to visitors as hearing the aircraft (see enclosure 3). 11

The study also found that overnight backcountry users are much more likely to hear aircraft and that they are almost 10 times as likely to feel that the noise interfered with natural quiet and their enjoyment and to be annoyed by the incident. This would indicate that increased flights will have a disproportionate impact on the experience of backcountry and wilderness users. It should be noted that over the past 4 years backcountry use has been by far the fastest growing visitor use at Great Sand Dunes NM.

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RESPONSES TO COMMENTS

Response to Comment No.8

Figure 4 presented on page F-65 was prepared by and provided by the Colorado Airspace Initiative Working Committee as part of their recommendations regarding the ANG's proposal (see Appendix F). Easier to read and more detailed maps presenting land use resources and biological resources prepared specifically for the EIS are presented throughout Section 3 and Subsections 4.2 and 4.6 of the EIS.

Bent's Old Fort National Historic Site is depicted on Figure 4-26 of the EIS. As shown, this site does not lie within the boundaries of the MOAs and MTRs that comprise the Colorado Airspace Initiative and no changes have been proposed for utilization of IR-177/501. Therefore, no impacts would be expected. In addition, military overflights have existed in the area for approximately 20 years. Potential impacts to the Florissant Fossil Beds National Monument and Great Sand Dunes National Monument were previously addressed in the EIS in Subsection 4.2.8.

In addition to Figure 4-28, Florissant Fossil Beds National Monument is depicted on VR-413 Figures 3-21 and 4-27. This monument is also depicted on Figures 3-24, 3-33, and 4-31.

Response to Comment No.9

It is anticipated that aircraft on IR-177/501 will not utilize or be part of training events scheduled for Two Buttes MOA. However, to ensure cumulative impacts were addressed, flight (sortie) numbers from Volume II, Appendix N were utilized, as appropriate, in the analysis.

Response to Comment No.10

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.11

The concept of natural quiet as a resource has been added to the Final EIS. This new discussion may be found in Subsection 4.14.

Program Manager, CAI EIS 4

Natural quiet is considered a significant resource in units of the National Park System including wilderness areas. The proximity of VR-413 to Great Sand Dunes NM and Florissant Fossil Beds NM remains of concern, especially in light of the past record of military aircraft straying from the assigned corridor along this route. As the September 12, 1994, Report to Congress on Effects of Aircraft Overflights (see enclosure 3) on the National Park System states "Natural quiet is a resource for preservation within the NPS mandate... When visitors can hear the sound of aircraft, natural quiet does not exist."

The report went on to say, "The human auditory system is an excellent mechanism for determining the presence or absence of natural quiet. No readily available electronic device can duplicate human hearing for identifying audible sounds produced by non-natural sources... The difficulty of preserving natural quiet is directly related to how quiet it is. If natural quiet, natural ambient sound, is relatively loud, as along a beach with pounding surf, or near a waterfall, then intruding non-natural sounds will have to be comparably loud to be heard. On the other hand, in a remote park location with no wind or water, or one with little or no vegetation or wildlife, even very quiet intruding non-natural sounds will be audible."

Under the Preferred Alternative, planes using the La Veta MOA and VR-413 would be both seen and heard at Great Sand Dunes NM, and those using VR-413 would be seen and heard at Florissant Fossil Beds NM. Table G-1, Land Use Compatibility with Yearly Day-Night Average Sound Levels does not list national parks or wilderness areas as a land use. This should be corrected in the FEIS. 12

The 65 dB standard for annoyance, G.2.3, is inappropriate in these settings. Again, studies of park overflights found that aircraft noise as low as 40 dB was annoying to between 10 percent and 40 percent of park visitors depending on the location and level of natural background sound. It is apparent that it is not only the loudness of the overflights that annoys visitors, but the nature of the noise. 13

A study of the effect of aircraft noise on park visitor experience similar to those conducted at Grand Canyon National Park should be conducted at Great Sand Dunes NM/wilderness and Florissant Fossil Beds NM prior to publication of the FEIS. To the extent that the study of NPS areas applies to State parks, such as San Luis Lakes State Park, the negative impact to the visitor experience in those areas located within MOAs or MTRs could be very significant. The significance of these impacts will need to be determined before NPS can comment on any Section 4(f) evaluation. 14

RESPONSES TO COMMENTS

Response to Comment No.12

Table G-1 does include "parks" under the recreation subcategory. This information is from a reference (FICUN 1980) used to support the development of this appendix for the EIS. This report did not include national parks or wilderness areas. Adding these categories to this table would misrepresent the reference.

Response to Comment No.13

The approach used in the EIS has been modified. The Federal Interagency Committee on Noise (FICON), representing a variety of Federal agencies with a mix of concerns associated with aircraft noise, reviewed aircraft noise analyses issues in 1992. This committee's report (FICON 1992) continued an approach to evaluating relative impacts associated with aircraft noise that has been recognized by noise analysis experts as the most widely endorsed and comprehensive approach to aircraft noise analysis available. This approach to noise analysis was incorporated into the analyses associated with the Draft EIS. In general, Federal land use compatibility criteria are derivatives of guidelines first devised for land near airports. All land use compatibility is based on the use of Day-Night Average Sound Level (abbreviated as DNL or Ldn) as the descriptor representing community noise environments. The criteria treat areas below DNL 65 dB as compatible for all uses, including residential, and they treat DNL 65 dB as a threshold for significant exposure. There is no generally accepted method for treating rural areas differently for these purposes.

However, many EIS reviewers, including some members of the Federal regulatory community, felt the application of the FICON standards, and the 65 dB threshold, to a rural setting was inappropriate for such areas with more quiet ambient noise conditions. Consequently, the use of the 65 dB threshold as the sole means to assess relative impacts or the acceptability of noise levels associated with aircraft operations addressed in the EIS has been modified and the analysis now includes additional information to evaluate potential impacts.

RESPONSES TO COMMENTS

Response to Comment No.14

Under the Preferred Alternative, the Great Sand Dunes National Monument will not be overflown by aircraft on VR-413. The northeast portion of the Florissant Fossil Beds National Monument is anticipated to be overflown at a minimum of 1,500 feet above ground level or avoided laterally.

See response to Comment No. 1 addressing section 4(f) issues.

Audibility is the primary noise descriptor that should be used for these areas and a new section in the FEIS analyzing effects to natural quiet in remote rural areas. Degradation of the environment should be specifically addressed, especially in light of the National Academy of Science's guidelines. The NPS would be happy to cooperate in the preparation of this additional section in the FEIS. 15, 16

In order to determine the effects to park lands, a cooperative sound monitoring program should be initiated at all NPS areas affected by the CAI before the FEIS is prepared. Please contact Bill Wellman at Great Sand Dunes NM (719-378-2312) to discuss this program as soon as possible; the NPS would like to have an independent observer participate in the tests. You may wish to consult with the U.S. Air Force about their funding of noise mitigation studies in NPS areas in Alaska. Should effects to NPS resources be identified, future additional modifications to the routes proposed will need to be considered.

Additionally, the FEIS should contain a study and analysis of the economic value of solitude and natural quiet for at least the San Luis Valley and South Park areas of Colorado. The study should include the economic value to tourism, retreats (religious and other), real estate, and the value as an attractant to new business. 17, 18

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Wilderness

With the minimal level of detail provided in the maps of the Draft EIS, it is difficult to determine specific locations and areas. However, the Beaver Creek Wilderness Study Area (WSA) is located within the proposed Airburst A MOA. The WSA is located 10 miles northeast of Canon City in Fremont, Teller, and El Paso Counties. The Study Area has 26,150 acres of land of which 20,750 acres has been recommended for wilderness designation by the BLM. The majority of this area is located to the east of the Phantom Canyon Road (Fremont County Road 67). This WSA is unique in that it represents one of the few primitive, semiprimitive zones of its size along the Southern Colorado Front Range that is undeveloped and not roaded. 19

The Wilderness Act of 1964 references a wilderness area as "An area that has outstanding opportunity for solitude or a primitive or unconfined type of recreation. . . " The proposed changes to the Airburst MOA could have significant impact on the Beaver Creek WSA as an area that can offer outstanding opportunities of solitude. Low level flights over this area, combined with increased use of the area for various training maneuvers would increase the impact associated with noise and visual sightings. 20, 21

Response to Comment No.15

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.16

The ANG, at this time, is relying upon computer modeling techniques that have been field verified in various locations of southern Colorado. Since NPS properties are to be avoided, or overflown at higher altitudes, noise monitoring is deemed unnecessary.

Response to Comment No.17

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.18

The role of tourism in the local economy, and its impact from the alternatives associated with the CAI, have been studied in the EIS as a part of the evaluation of socioeconomic impacts. There are a number of factors, other than aircraft operations, that may affect tourism and the use of recreational areas, including weather, the proximity of other attractions in the area, and the economy. While it is possible that a tourist visiting an area may find an aircraft overflight to be annoying, no significant change to the tourist industry would be expected considering the fact that the majority of the CAI airspace has existed for many years and the relevant influences from military aircraft operations are not changing in the study area. The contribution of tourism earnings to total industry earnings was presented in the EIS for each airspace. In all instances, these values were very consistent with overall state levels of tourism earnings as compared to industry earnings.

Response to Comment No.19

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.20

The ANG adheres to its "Policy on Air National Guard Overflights of Designated Wilderness and Wild and Scenic Rivers," as presented in Appendix L. This policy is intended to protect specifically identified areas, such as the Sangre de Cristo and Greenhorn Mountain Wilderness Areas, by limiting training operations to no lower than 2,000 feet above ground level whenever possible unless safety of the flight or operational parameters (e.g., weather conditions) may be compromised.

The preferred alternative also calls for an increase in sorties in this MOA.

The nonimpairment standards specified in the U.S. Department of the Interior "Interim Management Policy and Guidelines for Lands Under Wilderness Review" states these goals: (1) to ensure that any area that now satisfies the wilderness definition in section 2(c) of the Wilderness Act will satisfy that definition when the secretary sends his wilderness recommendations to the President and thereafter until Congress acts, and (2) to ensure that, by the time the Secretary sends his wilderness recommendations to the President, the area's wilderness values have not been degraded so far, compared with the area's values for other purposes, as to significantly constrain the secretary's recommendation with respect to the area's suitability or nonsuitability for preservation as wilderness. 22

The affects of the visual sightings and noise of low-flying jets will decrease the wilderness values and recreational experience within these areas. If the wilderness recreational experience of visitors to these areas is negative, recreational use may decrease. The FEIS should fully analyze the impacts to wilderness values and the potential effects on visitation and recreational use. 23

Cultural Resources

The headquarters at Great Sand Dunes NM is listed on the National Register and is within 1 mile of the La Veta MOA and should be included in Table 4-69. The ranch house at the Zapata Ranch located under VR-413 is also listed on the National Register and should be added to the list. Bent's Old Fort NHS is also listed on the National Register. 24 25

Bent's Old Fort NHS' cultural setting has been deliberately screened by distance or vegetation from 20th century intrusions insofar as possible. Increased flight activity in proximity to the historic site would diminish the living history experience. This interpretive approach is used to aid the visitor, through all their senses, with understanding and appreciating the heritage the historic site represents in place and time.

Bent's Old Fort is in a rural agricultural setting that is compatible with the current ambient noise level. However, a study should be made to understand and compare the proposed noise levels to those which now exist. No such data are available at this time. 26

RESPONSES TO COMMENTS

Response to Comment No.21

The ANG makes every effort to protect designated wilderness areas from aircraft noise. Non-designated areas and general lands under the jurisdiction of the Bureau of Land Management that may be viewed as pristine areas to many citizens carry no special protections from man-made noise sources. Should specific sensitive areas or noise receptors be identified, procedures may be implemented to provide avoidance of aircraft overflights of these areas.

Response to Comment No.22

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.23

Overall flying hours would be reduced from 5005 (baseline) to 4600 (proposed). Under proposed conditions, the bottom altitudes of several airspaces would be raised from existing conditions to reduce noise levels. Therefore, while potential adverse impacts could occur, the degree and intensity of such impacts would be reduced compared to the No-Action Alternative.

Response to Comment No.24

The Great Sand Dunes National Monument and its headquarters are located outside the boundaries of the La Veta MOA and are not located within the ROI.

Response to Comment No.25

Comment noted. Text changed in Subsection 3.8.7.

Response to Comment No.26

Bent's Old Fort National Historic Site is depicted on Figure 4-26 of the EIS. As shown, this site does not lie within the boundaries of the MOAs and MTRs that comprise the Colorado Airspace Initiative and no changes have been proposed for utilization of IR-177/501. In addition, military use of nearby areas has existed for approximately 20 years. Therefore, no impacts would be expected.

Program Manager, CAI EIS 7

Gold Belt National Back Country Byway/Garden Fossil Area

The Gold Belt National Back Country Byway, a large part of which is in the Airburst A MOA, was one of the first byways designated in Colorado. The Byway is a partnership effort between several counties, towns and agencies. The purpose of the byway, a part of the national Scenic Byways program, is to provide the public an opportunity to enjoy scenic corridors that are off the main highways. -27

The Garden Park Fossil Area, located along the Byway, is one of our world's most important dinosaur localities. Many of the best examples of well known dinosaurs have been excavated in the area over the past 120 years. There is a proposal to build a world class Dinosaur Discovery Center with interpretive trails in the next several years. Increasing the noise and visual sightings of jets along the Byway and within the Fossil Area would negatively affect the visitors experience. The FEIS should fully analyze impacts to the natural environment and possible effects to the visitor experience and recreational use. -28

Arkansas Headwaters Recreation Area

A portion of flight route VR-413 crosses the Arkansas Headwaters Recreation Area northwest of Howard, Colorado. This part of the Arkansas River is known for generally flat water and excellent fishing. Many people prefer this stretch for its peace and quiet. The CAI proposes a sharp increase in the number of flights through this area. This will further degrade the peace and quiet in this part of the river. The FEIS should fully analyze the impacts to the natural environment and possible effects to the visitor experience and recreational use. -29

Applicability of Section 4(f)

The role of the FAA in the Environmental Impact Statement is unclear. However, it appears from statements on pages 1-1 and 1-12 that implementation of this proposal will require FAA approval. Accordingly, as the National Park Service advised you in their September 3, 1993, scoping comments for this EIS, Section 4(f) of the Department of Transportation Act [49 U.S.C. §1653(f)] will apply. This provision states ". . . the Secretary [of Transportation] shall not approve any program or project which requires the use of any publicly owned land from a public park . . . unless (1) there is no feasible and prudent alternative to the use of such land, and (2) such program includes all possible planning to minimize harm to such park . . . resulting from such use." -30

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RESPONSES TO COMMENTS

Response to Comment No.27

Comment noted. Additional information identifying Gold Belt National Back Country Byway has been added to Figure 3-12 of the Final EIS. This Byway is discussed in Subsection 3.5.2.4.

Response to Comment No.28

Airburst A (currently Fremont) MOA is not changing in altitude structure. Also, flights (sorties) are, under the Preferred Alternative, decreasing from current usage. Based upon this reduction, current impacts should lessen, therefore, any potential impacts to the Byway and the fossil area will decrease. These resources are shown on Figure 3-12 of the Final EIS.

Response to Comment No.29

Although flights in this area are anticipated to increase under the Preferred Alternative, the total flights proposed will be less than one per day. In addition, aircraft flying in this area will be at higher altitudes due to the ANG Policy on wilderness overflight. Aircraft will normally be climbing from 1,500 feet above ground level to overfly the Sangre de Cristo Wilderness Area at no lower than 2,000 feet above ground level.

Response to Comment No.30

FAA approval of the airspace changes will be required. However, section 4(f) does not apply. In 1983 section 1653(f) of Title 49 was edited for clarity, inserting the word "transportation" before the words "program or project," and the text was relocated to section 303. See the response to Comment No. 1 for further information on section 4(f).

0030 Robert F. Stewart

In addition to NPS lands, Section 4(f) also applies to wildlife refuges; lands managed federally for park, recreation, wildlife, or historic purposes; lands developed with funds from the Land and Water Conservation Fund; state lands developed with federal grants; National Register properties; and publicly owned areas used as park, recreation, or refuge lands. If there are impacts to these types of lands, a Section 4(f) evaluation must be prepared. Courts have ruled that even if lands are not directly affected by a project, the fact that park lands are immediately adjacent to a proposal is enough to require a Section 4(f) determination. Prior to any action by FAA, this analysis should be prepared and circulated for our review. We recommend that the FEIS be amended to include this evaluation, and prudent and feasible alternatives and measures to minimize harm should be considered. If park lands cannot be avoided, mitigating measures must be considered. -31

Noise Analysis

The DEIS attempted to 1) identify existing noise and air quality conditions within various flight operations areas and training routes, and 2) indicate potential changes in future noise and air quality conditions which would result under each of three alternative scenarios (no action, original proposal, and preferred alternative).

Unfortunately, existing noise conditions were not measured (other than a brief period; June 1 - July 3, 1994), so "background" conditions were estimated (modeled) "based on historical records of aircraft operations." (Page 3-6) It is unclear whether these modeled values were based on the types of aircraft proposed to use the proposed operations areas (Page xix; "Types of aircraft flown include fighter aircraft such as F-16, F-111, F-14, F-15, and F-18; bomber aircraft such as B-1 and B-52; airlift aircraft such as C-130 and KC-135; and other like aircraft.") Also see page 4-91, 4.4.1.2 Methodology for Analyzing Impacts (Noise), paragraph 4, and I-1. -32

Potential noise impacts were similarly modeled based on "acoustical recordings of noise from F-16C, F-111F, and B-1B military aircraft ..." (page I-1) For some reason, the DEIS uses L_{dnmr}(dB) (Onset-Rate Adjusted Monthly Day-Night Sound Level, assumed to be A-weighted; dBA) as the primary value of potential noise impact comparison. See pages 4-97 through 4-111, Tables 4-48 through 4-61. This is a cumulative metric that adjusts the average sound levels over a 24-hour period to account for the sudden onset of aircraft noise events. The use of a monthly value is meaningless (since impacts occur at much shorter time periods) and misleading (biasing impact comparisons to small differences between averages). The impact is point-specific and -33

RESPONSES TO COMMENTS

Response to Comment No.31

See response to Comment No. 1 for ANG position on section 4(f).

Response to Comment No.32

Noise modeling was based on the actual aircraft types involved.

Response to Comment No.33

Ldnmr, which is based on a monthly period, accounts for impact of irregularly occurring events. An annual average, which is commonly used for analysis around airports, would tend to underestimate noise from such activities.

time-specific, and should be analyzed as such and not be included in an average noise level. Additionally, sudden-onset noise is entirely different than the slurred or rumbling onset noise and this should be addressed in the FEIS.

The comparison of potential daily SEL (Sound Exposure Levels, also assumed to be A-weighted) above 65 dBA is much more useful, but does not indicate the magnitude of potential impacts. Table H5 (pages H-22 and H-23) reports many occurrences where the measured SEL values exceed 90, and even 100 dBA. As indicated in Figure G-1 (page G-4), these noise levels are considered very loud, two to four times louder than a garbage disposer. 34

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In addition, a discrepancy needs to be resolved concerning measured and modeled maximum levels for F-16s, which disagree in the EIS up to 14 dBA.

In addition, we do not understand how the sorties in VR-413 can increase only from 100 to 176, and be at higher altitude, yet increase Ldn 14 dBA. It seems the sorties would have to increase by a factor of 25, not 1.76. Please explain this discrepancy in the FEIS. 35

The noise descriptor used in this EIS is the day-night average sound level, denoted by Ldn, which was designed for use in protecting the health and welfare of residents around major airports and other noisy environments. The Guard utilized the guidelines established by the Federal Interagency Committee on Noise for residential, recreational, and other land use. These guidelines are mainly use for planning in an airport environment and utilize 65 dB as the compatibility guideline. In other words, any sound above 65 dB is unacceptable and any sound below 65 dB is within the acceptable range. In the proposal identified in this EIS, it is the natural environment at NPS units and other noise sensitive areas that is at risk, rather than the health and welfare of residents. The features of Ldn that make it appropriate for use in protecting health and welfare (such as emphasizing brief, loud sounds and discounting long intervals of quiet) are precisely the features that make it inappropriate for protecting the environment. 36

The inappropriateness of exclusive reliance of Ldn in these cases was recognized by the Department of Energy in its Environmental Assessment for the proposed Davis Canyon nuclear waste repository site adjacent to Canyonlands National Park; and by the FAA for the Cal Black Memorial Airport near the Halls Crossing developed area at Glen Canyon National Recreation Area. The method of assessing effects of aircraft noise used in the draft EIS actually penalizes an area with natural quiet, because it yields a lower day-night average with aircraft noise. An increase of 10

Response to Comment No.34

Analysis of noise impact in the Final EIS contains additional discussion of single events.

Response to Comment No.35

Calculated noise levels account for numbers and types of operations, aircraft types, and the altitude distribution of operations. The resultant noise levels do not have a simple relationship with any one quantity. Also, the maximum noise levels for various alternatives did not necessarily occur at the same locations.

Response to Comment No.36

See Response to Comment No. 13.

dB represents a doubling of the perceived sound level. In the case of VR-413, the predicted increase would be 14 db. This appears to represent a significant impact. The draft EIS finding of "no significant adverse impacts" (section 4.4.8.2.) may not be justified.

Air Quality Analysis

Background air quality conditions were not even modeled. Since the areas of operations currently meet applicable air quality standards, it was assumed (but not quantified) that background conditions are equal to, or below the standard values. 37

Potential impacts were generally modeled for each alternative scenario, but the model results do not make sense. No input parameters were identified, so it is unclear if emission assumptions included all potential aircraft types and operating conditions (i.e.; were ground based emissions included in the model results). More significantly, the DEIS warns "modeling results are not to be compared between different MOAs and MTRs or between the No-Action Alternative, Original Proposal Alternative, or Preferred Alternative since the model represents the cumulative aircraft traversing a small segment of airspace." (page 4-185) If potential impacts can not even be compared between alternatives, the DEIS analysis is meaningless. 38

If the model results represent any information, it appears that potential impacts are so small that air quality would not be adversely impacted. However, since background conditions were assumed to be equal to ambient air quality standards, then any increase would exceed those standards, making the impact significant and adverse. 39

The DEIS also failed to consider state air quality statues which are more stringent than the National Air Quality Standards or Prevention of Significant Deterioration increments, and there are numerous typographical errors regarding these statutory requirements. Additionally, although it is proposed to increase sorties by 30-40 percent, it is very unclear what specific potential impacts to noise and air quality are likely to occur. 40

The FEIS should provide decision makers with adequate information on air quality impacts. This should include analysis demonstrating whether significant and adverse impacts are likely based on compliance with the most stringent applicable standards. 41

Wildlife

The Department of the Interior does not believe that averaging the ambient noise over a 24-hour period adequately addresses the 42

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RESPONSES TO COMMENTS

Response to Comment No.37

The ambient air quality conditions are monitored by all the states underlying the CAI. The reference for the ambient air quality is listed in Sections 3.2.8.1 through 3.15.8.1 entitled "Regional Air Quality." The referenced cited for the State of Colorado is CDH 1991, which quantifies the monitored air quality in each of the AQCRs and presents attainment status for all pollutants.

Response to Comment No.38

The text of the EIS has been changed and now the input/output data for the individual airspace segments are now included as a reference at Section 4.8.1.3 (i.e., SEA 1996). Section 4.8.1.3 also presents the air quality modeling analysis and, as discussed in this section, the purpose of modeling was to determine if the aircraft had any impact on air quality which could cause the State of Colorado to exceed NAAQS. The purpose was not to differentiate which alternative had the least air pollution emissions. A mobile source is only required to show that the PSD limits are not exceeded to demonstrate that local air quality will not violate NAAQS per 40 CFR 52. As stated in Section 4.8.1.3, no alternative would impact air quality. This statement is verified by showing that PSD limits are not exceeded. The reference USAF 1992, has additional background on the use of PSD limits to evaluate impacts on regional air quality.

Response to Comment No.39

Background concentrations were not assumed to be equal to NAAQS. As discussed in Section 4.8.1.2, the criteria for determining whether or not ambient air quality standards are impacted was to compare modeled emissions with the EPA Class I, II and III PSD limits under 40 CFR 52. The modeled results were compared with NAAQS to show that all emissions from the aircraft were insignificant and that no PSD limits would be exceeded or cause the state to violate any NAAQS.

Response to Comment No.40

As stated in Section 3.1.8, the states of Colorado, Kansas, and Wyoming have adopted NAAQS. The reference given in Section 3.2.8, CDH 1991, shows Colorado standards to be the same as national standards. The typographical errors in Table 3-3 have been corrected for the FEIS.

Table 2-5 under mission profile shows the sorties and flying hours decreasing under the proposed alternatives. With a reduction in flying hours, there will have to be a corresponding reduction in air pollution emissions.

RESPONSES TO COMMENTS

Response to Comment No.41

The MAILS model does show that air pollution emissions due to aircraft operating in the airspace to have no measurable effect on air quality. The results and conclusions are presented in Sections 4.8.2.1 through Section 4.8.15.3.

Response to Comment No.42

The analysis of the potential impacts to wildlife associated with the Colorado Airspace Initiative included a comparison of the existing noise environment to the modeled noise environment of the Original Proposal and the Preferred Alternative. The models predicted not only the Day-Night Average Sound Level (Ldn), but also the number of daily noise events that exceed a 65 dB Sound Exposure Level (SEL). The assessment of the predicted change in the noise environment on wildlife was augmented by interviews with wildlife biologists and resource managers, several studies conducted specifically for this EIS, as well as an extensive literature review. The analysis revealed that studies conducted on wildlife have shown that numerous wildlife species have the ability to adapt to the presence of man and various man-made sound sources, including jet aircraft noise. While the noise generated from low-altitude military overflights may be initially startling, habituation to jet aircraft noise occurs with most wildlife species. Species-specific responses to low-altitude overflights vary considerably, and responses from individual animals may have the potential to cause injury. However, wildlife populations are usually affected only when a variety of stressors work in combination to impact them, including declines or fluctuations in the availability of a food source, habitat destruction or alteration, predation, hunting, trapping, poaching, disease, or inclement weather, rather than noise alone. Normally, it would be unrealistic to predict or attribute any wildlife population declines to a single stressor, such as noise. In addition, no published scientific evidence was identified that indicated harm may occur to wildlife as a result of exposure to the levels of noise generated by military aircraft that would utilize the airspace associated with the Colorado Airspace Initiative.

However, several areas (i.e., waterfowl concentrations, threatened and endangered species locations, etc.) were identified as being particularly sensitive to military aircraft noise. Avoidance measures for these areas were developed, further reducing any potential impacts that could be attributed to the noise generated by the activities associated with the Colorado Airspace Initiative. A summary of these mitigation measures is presented in Section 4.18 in Volume I of the Final EIS.

affect of noise on wildlife. As is pointed out throughout the DEIS, the studies that have been conducted on the effects of noise on wildlife are relatively inconclusive and therefore the Guard concluded that there would be no significant impact from the average noise level. The fact that the studies are not conclusive does not mean no significant impact is occurring. Along these lines, the Guard references Manci et al., 1988, on page 4-125 and in the following sentence states that studies of this nature are "few and flawed." The FEIS should discuss why these studies are flawed and have been ruled out. 43

The CAI project area supports numerous species of wildlife. Of critical importance is the concern that excessive noise disturbance will be created and cause undue wildlife stress during critical survival periods. VR-413 overflies several significant wildlife areas including San Luis Lakes SWA and the BLM Blanca Habitat Area, which support nesting of migratory waterfowl and several Threatened and Endangered Category Two species. In addition, the area is winter range for the Bald Eagle and other raptors. High noise levels force waterfowl and other waterbirds off the nests and increase the mortality of nesting birds. With the MTR reduced in width by 50 percent and the number of sorties increased by 76 percent, the impacts on wildlife, including endangered species, will be increased. The FEIS should contain a detailed discussion and supporting data for the "no adverse impact" conclusion for VR-413. 44

In addition, because the narrowness of VR-413 will make lateral avoidance difficult, the Department of the Interior requests that the FEIS contain a detailed analysis of 1) the increased risk of bird strike incidents, 2) the impacts on nesting waterfowl, and 3) if these impacts are to be mitigated through not flying over the waterfowl areas during times of migration or nesting, a schedule of the "no fly" periods.

In previous correspondence, concern was expressed for impacts to the sensitive wildlife area located at the northwest portion of the Pueblo State Wildlife Area. This area is heavily used by waterfowl and raptors. Both IR-409 and the proposed Airburst C MOA will likely impact this area. This area should be avoided at least by a vertical avoidance measure and preferably, by complete avoidance. 45

Of the addressed alternatives, the preferred is the most acceptable from a fish and wildlife resource standpoint. However, as stated above, modifications to Airburst C and IR-409 at least of a vertical nature should be made. Additionally, the noise metric should be re-evaluated and a method should be used that does not average the noise impact over a 24-hour period. 46 47

RESPONSES TO COMMENTS

Response to Comment No.43

Comment noted. Additional information pertaining to this subject has been added to the Final EIS. See Subsection 4.6.1.3.2.

Response to Comment No.44

Information on waterfowl and migratory species has been included in Subsection 4.6.

Response to Comment No.45

Bird avoidance measures are incorporated into operational procedures for IR-409 during appropriate sections.

Response to Comment No.46

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.47

The analysis of the potential impacts to wildlife associated with the Colorado Airspace Initiative included a comparison of the existing noise environment to the modeled noise environment of the Original Proposal and the Preferred Alternative. The models predicted not only the Day-Night Average Sound Level (Ldn), but also the number of daily noise events that exceed a 65 dB Sound Exposure Level (SEL). The assessment of the predicted change in the noise environment on wildlife was augmented by interviews with wildlife biologists and resource managers, several studies conducted specifically for this EIS, as well as an extensive literature review.

Wildlife are affected by the event, not the average level of noise over a 24-hour period.

Endangered Species Act Comments

The FEIS should include the results of informal and formal (if necessary) consultation under section 7 of the Endangered Species Act of 1973 (ESA), as amended. We offer the following comments regarding threatened, endangered, and candidate species for your consideration and analysis. 48

The DEIS refers to the southwestern willow flycatcher (Empidonax traillii extimus) (flycatcher) as a category 1 candidate. However, on February 27, 1995, the U.S. Fish and Wildlife Service (FWS) published a final rule in the Federal Register (Vol. 60, No. 38) to list the flycatcher as endangered. Critical habitat for this species has been proposed. This information should be updated in the FEIS. 49

We are concerned with possible noise impacts to the Mexican spotted owl (Strix occidentalis lucida) (owl); however, more research is needed to document the effects of military aircraft noise disturbance on owls. Page 4-129 cites several studies completed and currently being conducted on the effects of noise and the owl. We suggest also referencing preliminary findings from a study currently being conducted in central New Mexico by Delaney and Grubb (1995). 50

Until more definitive answer to the questions of effects from overflights and their subsequent noise, the FWS is of the opinion that minimum, seasonal avoidance measures should be in place to reduce the chance of any affect on listed or sensitive species. The FWS maintains its recommended 1.5 nautical mile avoidance of peregrine falcon eyries should be implemented at least until the above study is completed. At the completion of that study, the FWS will re-evaluate this position and determine if it is appropriate or not. As mentioned in the DEIS, the peregrine falcon has been proposed for delisting. It should be noted that this is only a proposal. Until a decision is made to delist, the bird is still considered as listed and will be treated as such. 51

On August 27, 1993, the FWS provided a species list for New Mexico portions of this project. Several changes have been made to the FWS's candidate program; therefore, we have enclosed an updated list of threatened, endangered, and candidate species and species of concern for Union County. Candidates are those species for which the FWS has sufficient information on their biological status and threats to propose them as endangered or threatened, but for which issuance of a proposed rule is precluded by work on higher priority species. Species of concern 52

RESPONSES TO COMMENTS

Response to Comment No.48

See Appendix Q in Volume II for results of Section 7 consultations.

Response to Comment No.49

Comment noted. Southwestern willow flycatcher occurrence varies with airspace. Text changes have been made where applicable.

Response to Comment No.50

Comment noted. Additional information pertaining to the effects of military aircraft noise on the Mexican spotted owl (Strix occidentalix lucida) has been added to Subsection 4.6.1.3.4 in Volume I of the Final EIS.

Response to Comment No.51

The ANG believes standoff distances should be based on research and discussions with biologists involved, and as can be determined from past or ongoing studies, facts related to the listing of species, and trend analysis, such as bird recovery on front range, etc. Standoff distances have been proposed and been accepted in other areas of the country. The ANG will continue to work and communicate with CDOW, USFWS, USFS, BLM, and Fort Carson to ensure its activities are not adversely impacting any species. The ANG will support studies, if they can be scientifically validated to determine if and when military activities impact species.

Response to Comment No.52

Comment noted. Additional information pertaining to this subject has been added to the Final EIS. See Subsection 3.7.6.4 in Volume I of the Final EIS.

include those for which further biological research and field study are needed to resolve their conservation status. Candidate species and species of concern have no legal protection under the Act and are included in this document for planning purposes only. However, the FWS is concerned and would appreciate receiving any status information that is available or gathered on these species.

In addition, we suggest you contact the New Mexico Department of Game and Fish and the New Mexico Energy, Minerals, and Natural Resources Department, Forestry and Resources Conservation Division for information concerning fish, wildlife, and plants of State concern. Also, the Department of the Interior works closely with the Colorado Division of Wildlife since wildlife and their habitat need to be managed together. We support the concerns and comments submitted by the Division of Wildlife. 53

Insufficient Data

In almost all impact analysis topics, statements are presented without sufficient data to support the conclusions. A review of Summary of Impacts Tables shows that few significant impacts were identified for the CAI. For example in table 2-12, of the 12 categories listed, 11 are "no impact," "no significant impact," "negligible," or "minimal." Impacts in the twelfth category, noise, were not characterized in the table, but in section 4.4.8.2 noise is characterized as "no significant adverse impacts." However, data in the draft EIS do not support these assessments. The loudness more than doubles and the number of flights increases by 76 percent, both of which would be considered significant impacts by most reviewers. 54

Part 4, Environmental Consequences, contains little detailed analysis of data and appears to be mostly descriptive. The Environmental Consequences section of the FEIS must include references to the data used to assess impacts (actual data when practical) and a more detailed analysis that leads to the conclusion of "no adverse impact," "no significant impact," etc. 55

Cumulative Impacts

In previous correspondence with the Guard, the FWS made several recommendations pertaining to fish and wildlife resources that should be addressed in the DEIS. One major point was that the cumulative impacts from all military flights utilizing this airspace should be assessed. This DEIS assesses only the impacts from the 140th Fighter Wing. However, the 140th Fighter Wing is not the only unit that will be utilizing this airspace. Therefore, the cumulative impacts from all use of this airspace should be addressed. The DEIS does provide the cumulative use of 56

Response to Comment No.53

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.54

Additional information, previously used to determine these conclusions, has been added to the Final EIS. These include noise contour maps for the airspaces and additional detail on representative individual mitigations associated with each airspace component.

Response to Comment No.55

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.56

Appendix N in Volume II of the EIS presents information on the utilization of all military airspace coincidental to and within the region of influence of the military airspace associated with the Colorado Airspace Initiative. Furthermore, the sortie totals presented for the Colorado Airspace Initiative account for all military units that will train in the airspace, including the 140 WG of the Colorado Air National Guard. The EIS analyzed these cumulative sortie totals in the analysis of cumulative impacts.

Program Manager, CAI EIS

the airspace by sorties by aircraft type but only seems to account for the 140th Fighter Wing aircraft impacts. The FEIS should also compare future use to actual current use, not maximum use 8 or 10 years ago. It appears that a programmatic EIS on all military flights using the airspace would be in order. 57

Additional page-specific comments are enclosed and hereby incorporated into this letter.

Sincerely,

Robert F. Stewart
Regional Environmental Officer

Enclosures

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RESPONSES TO COMMENTS

Response to Comment No.57

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Enclosure 1

PAGE-SPECIFIC COMMENTS, COLORADO AIRSPACE INITIATIVE EIS

Summary/Cumulative Impacts

Pages xvii and 4-258: The cumulative impact analysis is inadequate and should be expanded in the FEIS. While the DEIS did an admirable job of determining the total number of sorties flown, there is no analysis of the effects of these operations. In addition, the analysis should be expanded to show the effects of all overflights, both military and civilian. 58

Description of Proposed Action and Alternatives

Page 2-45: Because of the provisions of Section 4(f) of the Department of Transportation Act, the Guard should also include in the procedures provisions to protect all park lands, wildlife refuges, and recreation areas. 59

The Guard policy of avoiding overflights of wilderness when possible and flying a minimum of 2,000' AGL when over wilderness is commendable. We note that the preferred alternative eliminates overflight of several areas including the VR-413 overflight of the Great Sand Dunes wilderness. The Guard policy states that "Wilderness will be overflown at 2,000 feet AGL, or higher, whenever possible, to comply with the intent of the FAA advisory on overflights." Does the "whenever possible" mean the 2,000' AGL will be observed whenever possible or the flights will be higher than the 2,000' AGL whenever possible? We would hope the second is the case. 60

With the implementation of this policy, it would appear that the portions of the La Veta MOA in Saguache and Alamosa counties are no longer useful. In previous conversations with NPS, the Guard indicated this area was needed to practice low level flying over mountainous terrain and to practice radar avoidance, neither of which is possible at 2,000' AGL. Moving the MOA boundary to the ridgeline would provide a good visual boundary for pilots and would greatly reduce the impact on Great Sand Dunes NM. An alternative that changes the west boundary of the La Veta MOA to the Saguache and Alamosa county lines (crest of the Sangre de Cristo mountains) should be analyzed. This alternative and reasons for its elimination from consideration should be included in the FEIS. 61

Page 2-54, section 2.6.1.4 Land Uses and Resources: The statement "Because neither the Original Proposal nor the Preferred Alternative involves ground disturbance, no impacts are expected for access to, or use of, land resources" is inaccurate. Under the provisions of Section 4(f) of the Department of Transportation Act, use can occur because of impacts to adjacent (or, in this case, overflown) lands. The Department of the 62

RESPONSES TO COMMENTS

Response to Comment No.58

The modeling of impacts (e.g., noise analysis) used total sorties developed in Appendix N to predict cumulative impacts. Information on civilian air traffic is not available.

Response to Comment No.59

See response to Comment No. 1 for ANG position on section 4(f).

Response to Comment No.60

The ANG policy to avoid wilderness areas by a 2,000-foot minimum above-ground level (AGL) altitude means that pilots may overfly these areas at 2,000 feet AGL or higher. Flights will vary depending on flying conditions and training requirements but will vary from higher altitude to no lower than 2,000 feet AGL whenever possible.

Response to Comment No.61

Under the Preferred Alternative, LaVeta MOA's physical boundaries and altitudes are not proposed to change. In the areas of Alamosa and Saguache Counties, the altitude of the MOA is 13,000 feet above mean sea level. With the ANG policy addressing wilderness overflight, these counties should not experience any flights less than 2,000 feet above ground level.

Response to Comment No.62

See response to Comment No. 1 for ANG position on section 4(f).

Interior also takes exception to the statement "The analysis of land uses and resources does not reveal any significant impacts to sensitive land use receptors with noise impacts existing for a short period of time and then disappearing." Any overflight results in a degradation of natural quiet, and, as such, is an effect to park resources and visitors. The significance of the effect is determined by detectability and audibility. As previously mentioned, the FEIS should contain an analysis of these effects.

Page 2-55, Cultural Resources: Is the reference Naranjo or Navanjo? The reference section and this citation do not match. Although the draft EIS discusses the project with the Navajo and Southern Ute tribes, the Jicarilla Apache and some of the northern New Mexico Pueblo communities may also have sites affected. 63

Page 2-55, Socioeconomic Resources and Appendix G: The effects to park visitors should also be analyzed in the FEIS. In particular, the detectability and audibility of overflights and how that affects the visitor experience must be included. There are studies analyzing the effects of overflights on visitors in remote areas that can and should be referenced. 64

With 324,000 visitors in 1995, Great Sand Dunes NM is a major factor in tourism in the San Luis Valley. Over 90 percent of the visitors to the monument live more than 100 miles away. Over half of the visitors are from outside of Colorado with 3 percent-7 percent from foreign countries. The NPS economic impact model indicates that the economic impact of the monument alone exceeds the $5,853,000 listed in Table 3-80 for Alamosa and Saguache. The NPS model estimates a contribution of about $12,000,000. 65

The relative isolation of the northern end of the San Luis Valley is one of the prime attractions for visitors to the national monument and for new residents as well as the reason many long time residents remain. Low level overflights contradict this attraction and may lead to significant economic loss. For example, the Inn at the Zapata Ranch has neither television nor telephones. Its main attractions are peace, quiet, and superb natural scenery. Being located directly under VR-413, it may lose a good deal of its charm and business as well. While impacts of this type are difficult to assess, they are significant and should be more fully addressed. 66

Pages 2-59 through 2-72, Tables 2-6 through 2-19: The summary of potential air quality impacts for both the Original Proposal and Preferred Alternative state "No impact on compliance with national or state air quality standards." Our concern is potential impacts to air quality, not potential impacts on 67

RESPONSES TO COMMENTS

Response to Comment No.63

Comment noted. Text changed in Section 7 References. The correct reference is Naranjo.

Response to Comment No.64

The concept of natural quiet as a resource has been added to the Final EIS. This new discussion may be found in Subsection 4.14.

Response to Comment No.65

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.66

Socioeconomic conditions regarding employment and the local economy were previously addressed in the EIS in Section 3 and Subsection 4.9.

Response to Comment No.67

The CAA, Section 176(c)(1), requires that any Federal action must conform to the state implementation plan on air quality. Any proposed actions are not to:

· Cause or contribute to any new violations of any standard in any area
· Increase the frequency or severity of any existing violation of any area
· Delay timely attainment of any standard or any required interim emission reductions.

This section of the CAA is implemented by 40 CFR 51, Subpart W; which clearly states compliance with standards is the issue when discussing air quality.

The EIS addressed impacts to air quality as well as compliance. The EIS evaluated aircraft air pollution resulting from each of the alternatives studied in the EIS using scientifically validated emissions modeling tools designed to predict ground-level pollutant concentrations. The total air pollution emissions from the 140 WG would be reduced under the Preferred Alternative

compliance. Section 118 of the Clean Air Act requires compliance with "all Federal, State, interstate, and local requirements ... respecting the control and abatement of air pollution ..."; "compliance" is not an issue.

Affected Environment

Page 3-2, chart: National Historic Site should be added to the chart (Bent's Old Fort NHS is affected by IR-177/501), with the responsible agency as NPS, and typical uses of historic reenactments, historic interpretive tours, and sightseeing. Please also add the National Park Service and Bureau of Land Management as responsible agencies for wilderness areas. 68

Page 3-6, 3.1.4 Noise, Second paragraph: "The existing noise levels within the MOAs and MTRs associated with the Colorado Airspace Initiative have been determined based on historical records of aircraft operations." Background noise levels should be determined through actual, long-term monitoring, or modeling of all potential sources (not just aircraft) which contribute to background conditions. 69

Page 3-7, 3.1.4 Noise, Second paragraph: The brief "ambient noise monitoring survey" is not adequate to determine background noise conditions, but is useful for comparison to the predicted (modeled) background conditions. However, due to incomplete data collection, Sites 05, 08, 15, and 17 should not be included in the analysis.

Page 3-11, 3.1.8 Air Quality, Table 3-3 National Ambient Air Quality Standards: This table is based on the assumption that only National Ambient Air Quality Standards (NAAQS) apply. However, various Colorado, New Mexico and Wyoming State standards are more stringent, and should be the basis for comparison. In addition: 70

- the ozone 1-hour NAAQS is 235 $\mu g/m^3$ (not 245 $\mu g/m^3$),
- the carbon monoxide 1-hour NAAQS is 35 ppm/40,000 $\mu g/m^3$ (not 35.0 ppm/40 $\mu g/m^3$),
- the carbon monoxide 8-hour NAAQS is 9 ppm/10,000 $\mu g/m^3$ (not 0.0 ppm/10 $\mu g/m^3$),
- the PM_{10} "pollutant" is inhalable particulate matter (not suspended particulate matter), and
- there is no 30-day lead standard.

Page 3-12, 3.1.8 Air Quality, Table 3-4 Maximum Allowable Limits for Prevention of Significant Deterioration Areas: This table is based on the assumption that only National Prevention of Significant Deterioration increments apply. However, Colorado sulfur dioxide increments are more stringent, and should be the 71

and the Original Proposal as compared to existing conditions, because the total number of flying hours would be reduced from 5005 to 4600 hours. The cumulative air pollution concentrations, as determined through computer modeling for each of the airspace segments, could increase or decrease depending upon à variety of factors. These factors include the type of aircraft using the airspace, their altitude, frequency, power setting and meteorological conditions rather than a strict proportional relationship to the number of sorties flown. Nonetheless, under the worst case scenario modeled for each airspace segment under each of the alternatives, no air pollution concentrations resulting from aircraft operations would cause any local area to be out of compliance with Federal or state standards or make any significant impact on air quality in any area. Also, when comparing these air pollution concentrations with Federal and state limits for the Prevention of Significant Deterioration (PSD) in air quality, all levels were far below minimums.

Response to Comment No.68

Comment noted. Text changed in Subsection 3.1.2.

Response to Comment No.69

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.70

Comment noted. Text has been changed in the Final EIS to correct typographical errors. Also, PM10 will be referred to as particulate matter since it could be confused with TSP.

Response to Comment No.71

Colorado Regulations, Department of Health, Chapter 1001, Air Quality Control Regulations; Regulation No. 3, Section X A. Air Quality Limitations has the state limits for sulfur dioxide listed the same as the Federal PSD limits.

basis for comparison. In addition, none of the increments (other than the Class I nitrogen dioxide annual increment) have significance below 1 $\mu g/m^3$ (no tenths).

Pages 3-22 through 3-219, Tables 3-6 through 3-143: The summary of potential noise expressed as L_{dnmr}(dB) (Onset-Rate Adjusted Monthly Day-Night Sound Level, assumed to be A-weighted; dBA) is meaningless (since impacts occur at much shorter time periods) and misleading (biasing impact comparisons to small differences between averages). The comparison of potential daily SEL (Sound Exposure Levels, also assumed to be A-weighted) above 65 dBA is much more useful, but does not indicate the magnitude of potential impacts. 72

Pages 3-26 through 3-225, Sections 3.x.8 Air Quality and 3.x.8.1 Regional Air Quality: Background air quality conditions are not even estimated in the DEIS; it was assumed (but not quantified) that background conditions are equal to, or below NAAQS values. 73

On page 3-52, last paragraph; the documents states, "The Recovery Team is still in the process of identifying critical habitat." Please note that the Recovery Team did not designate critical habitat for the owl but instead, developed the Recovery Plan (USDI 1995) for the owl. Critical habitat for the owl was designated by the Service on June 6, 1995. However, this project is not within designated critical habitat units. 74

Environmental Consequences

The Bighorn Sheep Lambing Area at the mouth of Medano Pass (adjacent to the northeast corner of Great Sand Dunes NM) is not shown on Figure 4-40. The Blanca SWA is not shown on Figure 4-45 although it is shown on Figure 4-40. Please add these areas to the figures. 75

Page 4-93, 4.4.1.3 General Findings, Table 4-47 Summary of Maximum Cumulative Noise Levels (L_{dnmr}, dB) by Alternative: Reporting potential noise impacts expressed as L_{dnmr}(dB) (Onset-Rate Adjusted Monthly Day-Night Sound Level, assumed to be A-weighted; dBA) is meaningless (since impacts occur at much shorter time periods) and misleading (biasing impact comparisons to small differences between averages). This meaningless comparison is further compounded by reporting "change in dB," a relatively small difference between two generalized averages. 76

On page 4-129, the DEIS discusses the ongoing study with the peregrine falcons. In the body of this paragraph, a completely different study conducted in 1981 is mentioned. This mixing of two studies is completely out of context and misleading. The paragraph makes it sound as if no reproductive failures occurred 77

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RESPONSES TO COMMENTS

Response to Comment No.72

Both Ldnmr and SEL are, by their definitions, based on A-weighted sound levels. Ldnmr provides a recognized measure of cumulative impact of noise. SEL provides supplementary description of individual events.

Response to Comment No.73

Current background conditions for air quality were not assumed. Sections 3.1.8.1 through 3.15.8.1 list the State of Colorado air quality monitoring sites and the attainment status for each AQCR. A reference for each ROI is presented in the above sections for this attainment status. For Colorado, the reference included was CHD 1991 and for Kansas or Wyoming the references were from 40 CFR 52.

Response to Comment No.74

Comment noted. Mexican spotted owl occurrence varies with airspace. Text changes have been made where applicable.

Response to Comment No.75

Comment noted. The referenced figures were updated to include the subject information.

Response to Comment No.76

Ldnmr is a cumulative metric which accounts for the loudness of individual events, the duration of each event, and the number of events per day. It includes penalties for nighttime events and for the startle factor of high speed low altitude military aircraft noise. It is widely accepted for the assessment of noise in a wide variety of situations.

It is required that changes in the noise environment be assessed. The difference in level between alternatives is a direct measure of this.

Response to Comment No.77

Comment noted. The text in Subsection 4.6.1.3.4 has been changed to clarify and separate the two separate studies.

in the study area. This statement is not appropriate in this paragraph.

Page 4-184, 4.8.1.2 Methodology for Analyzing Impacts (Air Quality): The air quality impact analysis does not indicate what emission assumptions were used in the MAILS model. For example, were emission factors for operational aircraft (Page xix) used in modeling; and were ground based emissions (i.e.; taxi, holding, take-off, etc.) included in the model? 78

Page 4-185, 4.8.1.2 Methodology for Analyzing Impacts (Air Quality), paragraph 3: What is the meaning of the statement "Modeling results are not to be compared between different MOAs and MTRs or between the No-Action Alternative, Original Proposal Alternative, or Preferred Alternative since the model represents the cumulative aircraft traversing a small segment of airspace"? Clearly, some relationship between potential air quality impacts and the number of sorties should be evident. If potential impacts can not even be compared between alternatives, the DEIS analysis is meaningless. 79

Pages 4-186 through 4-205, Tables 4-93 through 4-126: The summary of potential air quality impacts include several inaccuracies including:

- the pollutants of concern:
  - nitrogen dioxide/NO_2 (not nitrogen oxides/NO_x), 80
  - inhalable particulate matter/PM_{10} (not suspended particulate matter/PM_{10}), and
  - sulfur dioxide/SO_2 (not sulfur oxides/SO_x),
- potential ozone impacts were not analyzed, 81
- none of the increments (other than the Class I nitrogen dioxide annual increment) have significance below 1 $\mu g/m^3$ (no tenths). 82
- the NO_2 annual Class I increment is 2.5 $\mu g/m^3$ (not 2.0 $\mu g/m^3$), and
- the PM_{10} 24-hour Class II increment is 37 $\mu g/m^3$ (not 137.0 $\mu g/m^3$). 83

Page 4-185, 4.8.2.1 Original Proposed Alternative (Cheyenne MOA): Although the Proposed Alternative represents a 52 percent increase in sorties, modeled impacts predict either identical values or slightly lower impacts than the No Action Alternative. The FEIS should explain this apparent anomaly. 84

Page 4-187, 4.8.3.1 Original Proposed Alternative (Pinon Canyon MOA): Although the Proposed Alternative represents only a 7 percent increase in sorties, modeled impacts predict significantly higher impacts than the No Action Alternative, and

RESPONSES TO COMMENTS

Response to Comment No.78

The input/output data for the MAILS model will be included as a reference in Section 4.8.1.2 of the FEIS.

Response to Comment No.79

The total air pollution emissions from the 140 WG in the CAI would be reduced under the Preferred Alternative and the Original Proposal because the total number of flying hours are reduced from 5005 to 4600 hours. The modeled cumulative air pollution concentrations are not dependent upon total annual sorties in the airspace segments; concentrations increase or decrease depending upon the type of aircraft using the airspace, their altitude, frequency, power setting, and meteorological conditions. However, under the worst case modeled for each airspace segment, no air pollution concentrations would cause any local area to be out of compliance with Federal or state standards or make any significant impact on air quality in any area. Also when comparing these air pollution concentrations with Federal and state limits for the Prevention of Significant Deterioration (PSD) air quality, all were far below minimum. See the reference USAF 1992 for procedures used in evaluating air quality impacts using the MAILS model.

Response to Comment No.80

Nitrogen oxides (NOx) and sulfur oxides (SOx) are standard air pollutant emission terms used to designate NO and NO2 and SO2 and SO4, respectively. Refer to 40 CFR 50.4 for the use of this terminology. The PM10 will be referred to as particulate matter, since it could be confused with TSP.

Response to Comment No.81

Ozone was not modeled because there are no EPA or state approved dispersion models that will perform this function for aircraft emissions. Ozone reductions are achieved through corresponding reductions in nitrogen oxide and hydrocarbon emissions which are achieved in CAI by the reduction of flying hours from 5005 to 4600.

RESPONSES TO COMMENTS

Response to Comment No.82

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.83

All particulate PSD limits have been changed to reflect 1994 rule changes.

Response to Comment No.84

As discussed in Section 4.8.1.2, the modeled cumulative air pollution concentrations are not dependent upon total annual sorties in the airspace segments; concentrations increase or decrease depending upon the type of aircraft using the airspace, their altitude, frequency, power setting, and meteorological conditions. As an example scenario, four aircraft may traverse the airspace in one hour counting as four sorties or they may fly one at a time over a 24-hour period counting as four sorties; they may be flying at 300 knots or 400 knots, counting as four sorties; they may be flying at 500 feet or 10,000 feet, counting as four sorties; they may be F-16, F-111, KC-135, or other type aircraft, counting as four sorties; and the dispersion height may be between 300 meters and 1000 meters, still counting as four sorties. Additionally, all emissions are cumulative for aircraft. A review of these parameters is given in reference SEA 1996. A discussion on the input data and its effect on the MAILS model is given in reference USAF 1992(a).

very similar impacts to the Preferred Alternative (which represents a 51 percent increase in sorties). The FEIS should explain the relationship between sorties and impacts.

Page 4-189, 4.8.4.1 Original Proposed Alternative (La Veta MOA): Although the Proposed Alternative represents a 4 percent decrease in sorties, modeled impacts predict significantly higher NO_2 impacts than the No Action Alternative, and very similar impacts to the Preferred Alternative (which represents a 16 percent decrease in sorties). The FEIS should explain the apparent inconsistency.

Page 4-190, 4.8.5.1 Original Proposed Alternative (Airburst MOA): Although the Proposed Alternative has nearly the same number of sorties, modeled impacts predict significantly higher CO, NO_2, PM_{10}, and SO_2 impacts than the No Action Alternative. Again, the FEIS should explain the discrepancy.

Page 4-191, 4.8.5.2 Preferred Alternative (Airburst MOA): Although the Preferred Alternative represents a 13 percent increase in sorties, modeled impacts predict significantly lower CO and SO_2 impacts than the No Action Alternative. Again, the FEIS should explain this apparent anomaly.

Page 4-192, 4.8.6.2 Preferred Alternative (Two Buttes MOA): Although the Preferred Alternative represents a 22 percent increase in sorties (over the Original Proposal Alternative), modeled impacts predict "essentially the same" impacts, "with NO_x [sic] increasing by less than 3 percent." Again, the FEIS should explain the inconsistency.

Page 4-192, 4.8.6.3 No-Action Alternative (Two Buttes MOA): The analysis incorrectly reports potential air quality impacts when no sorties would occur under the No-Action Alternative. The statement "Several existing MTRs traverse the MOA" indicate the reported impacts should be included in Chapter 3, Existing Environment (background). 85

Page 4-193, 4.8.7.1 Original Proposed Alternative (IR-409): Although the Proposed Alternative represents a 35 percent decrease in sorties, modeled impacts predict either identical values or significantly higher NO_2 impacts than the No Action Alternative. Again, the FEIS should explain the discrepancy.

Page 4-193, 4.8.7.2 Preferred Alternative (IR-409): Although the Preferred Alternative represents a decrease in sorties (69 percent whole route, 27 percent F-I), modeled impacts predict either identical values or significantly higher NO_2 impacts than the No Action Alternative. Again, the FEIS should explain the apparent anomaly. 86

RESPONSES TO COMMENTS

Response to Comment No.85

Section 3.1.8 states the following: "Existing air emissions from current aircraft operations are presented in Section 4 concurrent with projected emissions from proposed aircraft operations. This provides for easier comparison of current and proposed aircraft operations and the subsequent impact each has on NAAQS."

Response to Comment No.86

See response to Comment No. 84.

Page 4-195, 4.8.8.1 Original Proposed Alternative (VR-413): Although the Proposed Alternative represents a 154 percent increase in sorties, modeled impacts predict nearly identical values (other than increased NO_2 impacts) as the No Action Alternative. Again, the FEIS should explain the apparent discrepancy.

Page 4-196, 4.8.8.2 Preferred Alternative (VR-413): Although the Preferred Alternative represents a 76 percent increase in sorties, modeled impacts predict nearly identical values (other than increased NO_2 impacts) as the No Action Alternative. Again, the FEIS should explain the apparent inconsistency.

Page 4-197, 4.8.10.1 Original Proposed Alternative (IR-414): Although the Proposed Alternative represents a 100 percent increase in sorties, modeled impacts predict nearly identical values (other than lower annual NO_2, PM_{10}, and SO_2 impacts) as the No Action Alternative. Again, the FEIS should explain the anomaly.

Page 4-198, 4.8.10.2 Preferred Alternative (IR-414): Although the Preferred Alternative represents a 287 percent increase in sorties (over the Original Proposal Alternative), modeled impacts predict "essentially the same" impacts. Again, the FEIS should explain this inconsistency.

Page 4-199, 4.8.11.3 No-Action Alternative (XIR-424): The analysis incorrectly reports potential air quality impacts when no sorties would occur under the No-Action Alternative. The statement "aircraft operations in the ROI" indicate the reported impacts should be included in Chapter 3, Existing Environment (background). 87

Page 4-202, 4.8.13.2 Preferred Alternative (IR-416): Although the Preferred Alternative represents a 50 percent increase in sorties (over the Original Proposal Alternative), modeled impacts predict very similar impacts. The FEIS should explain this apparent anomaly.

Page 4-203, 4.8.14.2 Preferred Alternative (XIR-426): Although the Preferred Alternative represents a 50 percent increase in sorties (over the Original Proposal Alternative), modeled impacts predict "essentially the same" impacts. The FEIS should explain this apparent anomaly. 88

Page 4-203, 4.8.14.3 No-Action Alternative (XIR-426): The analysis incorrectly reports potential air quality impacts when no sorties would occur under the No-Action Alternative. The statement "current aircraft operations" indicate the reported

26

Response to Comment No.87

See response to Comment No. 85.

Response to Comment No.88

See response to Comment No. 84.

impacts should be included in Chapter 3, Existing Environment (background).

Page 4-205, 4.8.15.3 No-Action Alternative (XIR-1427): The analysis incorrectly reports potential air quality impacts when no sorties would occur under the No-Action Alternative. The statement "current aircraft operations in the ROI" indicate the reported impacts should be included in Chapter 3, Existing Environment (background). 89

Appendices

The relation between community response and even infrequent aircraft noise events is overstated on page G-5, as recent reactions in Colorado and New Jersey have shown. Please correct this in the FEIS. 90

In addition, a correction is needed in the table in Volume II, Page G-9. This table indicates that a level of 75 decibels is acceptable in "Amusements, parks, resorts, and camps." At a minimum, a footnote must be added to indicate that this does not apply to national parks. 91

Page H-20, Table H4 Summary of Continuous Noise Monitoring: Due to incomplete data collection, Sites 05, 08, 15, and 17 should not be included in the analysis. 92

Literature Cited

Delaney, D.K., and T.G. Grubb. 1995. Effects of helicopter noise on nesting Mexican spotted owl, study plan RM-4251-P3-E1-1: progress report no. 1 (1995 field season summary). USDA Forest Service, Rocky Mountain Forest and Range Experimental Station, Flagstaff, AZ.

USDI Fish and Wildlife Service. 1995. Recovery plan for the Mexican spotted owl: Vol.I. Albuquerque, New Mexico. 172pp.

RESPONSES TO COMMENTS

Response to Comment No.89

See response to Comment No. 85.

Response to Comment No.90

The noise-response relationship discussed is based on the preponderance of scientific evidence. The relationship does show significant variation in individual cases.

Response to Comment No.91

Table G-1 is reprinted from Federal Aviation Regulations. It would not be appropriate to modify it. The table as printed contains a disclaimer footnote.

Response to Comment No.92

There is no objective reason to exclude data summarized in Table H-4. The total operating time of the instruments at all sites is noted.

Enclosure 2

UNION COUNTY, NEW MEXICO
LIST OF ENDANGERED, THREATENED, AND CANDIDATE SPECIES
AND SPECIES OF CONCERN
May 1, 1996

Black-footed ferret, Mustela nigripes, E
Fringed myotis, Myotis thysanodes, SC
Long-legged myotis, Myotis volans, SC
Pale Townsend's (=western) big-eared bat, Plecotus townsendii pallescens, SC
Small-footed myotis, Myotis ciliolabrum, SC
Swift fox, Vulpes velox, C
Yuma myotis, Myotis yumanensis, SC
American peregrine falcon, Falco peregrinus anatum, E
Arctic peregrine falcon, Falco peregrinus tundrius, T (S/A)
Baird's sparrow, Ammodramus bairdii, SC
Bald eagle, Haliaeetus leucocephalus, T
Ferruginous hawk, Buteo regalis, SC
Loggerhead shrike, Lanius ludovicianus, SC
Mountain plover, Charadrius montanus, C
Northern goshawk, Accipiter gentilis, SC
Western burrowing owl, Athene cunicularia hypugea, SC
White-faced ibis, Plegadis chihi, SC
Whooping crane, Grus americana, E
Arkansas River shiner, Notropis girardi, PE w/CH
Flathead chub, Platygobio (=Hybopsis) gracilis, SC
Plains minnow, Hybognathus placitus, SC
Texas horned lizard, Phrynosoma cornutum, SC
Dwarf milkweed, Asclepias uncialis var. uncialis, SC

Index

E	=	Endangered
PE w/CH	=	Proposed Endangered with critical habitat
T	=	Threatened
C	=	Candidate Species
SC	=	Species of Concern
S/A	=	Similarity of Appearance

Enclosure 3

REPORT TO CONGRESS

REPORT ON EFFECTS OF AIRCRAFT OVERFLIGHTS ON THE NATIONAL PARK SYSTEM



PREPARED PURSUANT TO PUBLIC LAW 100-91, THE NATIONAL PARKS OVERFLIGHTS ACT OF 1987

NATIONAL PARK SERVICE

September 12, 1994

CHAPTER 3

EFFECTS OF OVERFLIGHTS ON NATURAL QUIET

The National Park Service manages "natural quiet" as a park resource. This responsibility is based in current public law, in explicit park management policy, and in visitors' reactions to park experiences. Just as parks contain many *tangible* features, such as animals, plants, waters, geological features, historic buildings and archeological sites, they have intangible qualities as well. These qualities include solitude, space, scenery, clear night skies, sounds of nature and natural quiet. Such qualities are increasingly rare in much of America. The scarcity of these resources and their importance to the park experience also makes them valued by park visitors.

3.1 How Important is Natural Quiet?

The concept of natural quiet and its importance as a resource is embodied in the 1916 NPS Organic Act, as amended.[1] For Grand Canyon National Park (GCNP), Congress embedded the concept into two major public laws. It is also stated quite explicitly in NPS policy. Natural quiet is also very important to park managers and to a majority of park visitors.

3.1.1 Importance to the Congress

As directed by the Organic Act:

> *".... The service thus established shall promote and regulate the use of the Federal areas known as national parks, monuments, and reservations hereinafter specified, except such as are under the jurisdiction of the Secretary of the Army, as provided by law, by such means and measures as conform to the fundamental purpose of such parks, monuments, and reservations, which purpose is to conserve the scenery and the national and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations."*

The national parks must be managed to conserve their resources and allow their enjoyment. This section has been interpreted by the courts as providing the Secretary of the Interior with authority to determine how best to control these areas.

The United States Congress has repeatedly recognized the need to preserve the national parks in their natural state. In Section 101(b) of the Act of March 27, 1978, P.L. 95-250 (The Redwood Act), 92 Stat. 166 (codified at 16 U.S.C. 1), Congress stated that:

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[1] NPS Organic Act, 16 U.S.C. 1

".... The authorization of activities shall be construed and the protection, management, and administration of these areas shall be conducted in light of the high public value and integrity of the National Park System and shall not be exercised in derogation of the values and purposes for which these various areas have been established, except as may have been or shall be directly and specifically provided by Congress."

According to the legislative history of this provision, "the Secretary has an absolute duty, which is not to be compromised, to fulfill the mandate of the 1916 Act to take whatever actions and seek whatever relief as will safeguard the units of the National Park System." Furthermore, 16 U.S.C. 3 indicates that to carry out these Congressional mandates, the Secretary of the Interior "shall make and publish such rules and regulations as he may deem necessary and proper for the use and management of parks...." No limitations on the Secretary's power are noted. In the absence of specific Congressional mandate, the Secretary must determine for the National Park Service how best to protect park resources and thus how best to manage any adverse impacts.

In the case of GCNP, Congress has provided direct and explicit guidance. In the Grand Canyon National Park Enlargement Act of January, 1975, Congress stressed the importance of natural quiet in directing certain corrective actions whenever:

"... the Secretary has reason to believe that any aircraft or helicopter activity or operation may be occurring ... which is likely to cause an injury to the health, welfare, or safety of visitors to the park or to cause a significant adverse effect on the natural quiet and experience of the park ..." [2] (emphasis added)

Twelve years later, Congress reiterated the same concern in Public Law 100-91, The National Parks Overflights Act of 1987. A portion of that act states:

"Noise associated with aircraft overflights at the Grand Canyon National Park is causing a significant adverse effect on the natural quiet and experience of the park and current aircraft operations at the Grand Canyon National Park have raised serious concerns regarding public safety, including concerns regarding the safety of park users." [3]

Regarding guidance to achieve natural quiet in areas exposed to aircraft overflights, the legislative history of Public Law 100-91 provides important guidance on how a substantial restoration of natural quiet is to be achieved:

"Flight-free zones are to be large areas where visitors can experience the park essentially free from aircraft sound intrusions, and where the sound from aircraft traveling adjacent to the flight-free zone is not detectable from most locations within the zone."

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[2] Public Law 93-620, "Grand Canyon National Park Enlargement Act", 93rd Congress of the United States, January, 1975.

[3] Public Law 100-91, "Aircraft Overflights Act", 100th Congress of the United States, August, 1987.

3.1.2 Importance of Natural Quiet to the National Park Service

NPS management policy clearly articulates the value of natural quiet as a resource. Regarding the intrinsic value of the resource, NPS management policy (NPS 1988) states:

"The natural resources and values that the Park Service protects ... include plants, animals, water, air, soils, topographic features, geologic features, paleontological resources, and aesthetic values, such as scenic vistas, natural quiet, and clear night skies ..." (emphasis added)

NPS policy also tasks the agency with protecting natural quiet as a resource. Regarding protective actions to be taken, NPS policy (NPS 1988) states:

"The National Park Service will strive to preserve the natural quiet and the natural sounds associated with the physical and biological resources of the parks (for example, the sounds of the wind in the trees or of the waves breaking on the shore, the howl of the wolf, or the call of the loon). Activities causing excessive or unnecessary unnatural sounds in and adjacent to parks, including low-altitude aircraft overflights, will be monitored, and action will be taken to prevent or minimize unnatural sounds that adversely affect park resources or values or visitors' enjoyment of them." (Emphasis added)

These policy statements make clear the importance of natural quiet as a resource in many units of the National Park System. This resource is defined as the natural ambient sound conditions found in those units. It refers to the absence of mechanical noise, but accepts the "self-noise"[4] of park visitors. This definition provides local park managers with a point of departure for developing strategies to protect this resource.

NPS-77, Natural Resource Management Guidelines (NPS 1990), also addresses the issue of protecting aesthetic values. The Guidelines define "aesthetic value" as a:

"...value, in the framework of natural resource management in the NPS, that is attributed by people to natural, unmanipulated conditions and is perceived through the senses -- by seeing, hearing, touching, smelling, and tasting."

The Guidelines provide guidance on considering basic questions of aesthetics.

"To determine whether a proposed action or activity may affect resources and values important to the aesthetic experience, consideration of the following questions may be helpful. The questions can assist not only in evaluating the activities and actions that take place outside park boundaries, but also in those under the regulatory control of the NPS within park boundaries...

"Self-Noise" is the noise generated by the visitor--the tread of hiking boots on the trail, the creaking packframe, rattle of pots or pans, talking, etc.

Could the action or activity be seen from the park...?

Could the action or activity be heard in the park? Where in the park would the sound be most noticeable or intrusive? From developed overlooks, headquarters areas, or trails? Would the sounds be continuous or intermittent? Are there any ways in which the effects of the sound could be mitigated or lessened...?

Would the perceptible sight or sound change the nature or quality of the visitor's experience? In what ways...?

Does the frequency or duration of the activity or action affect the degree to which it could be perceived?

As these questions indicate, systematically looking at the effects of proposed activities or actions aims at evaluating what may be lost..."

The Guideline further notes that the courts have been reluctant to expand the regulatory control of the service for aesthetics beyond designated park boundaries. NPS managers are encouraged to look for methods other than litigation or Congressional appropriations to preserve the aesthetic integrity of parks.

3.1.3 Importance of Natural Quiet to Park Managers

In 1992 the NPS surveyed the managers of 98 parks (excluding Alaska parks) who had reported overflight problems. Although the questionnaire solicited the opinions about many aspects of aircraft overflights, three of the questions asked managers to consider the issue of natural quiet. As applied to their particular park, these questions asked for opinions about:

> The importance managers ascribe to providing an opportunity for park visitors to appreciate the natural quiet of the park, [5]
>
> The degree to which managers feel aircraft activity interferes with their ability to provide this opportunity, and
>
> The degree to which managers feel aircraft activity negatively impacts visitors' ability to appreciate natural quiet. [6]

Figure 3.1 provides a summary of the responses to the first question. Although managers attached most importance to visitor enjoyment at most parks, the opportunity for natural quiet is extremely important to half the managers, and moderately to very important to roughly the other half. Figure 3.2 shows the responses to the second question. More managers believe aircraft overflights interfere with the

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[5] This question was asked in a context of three different opportunities: Visitor Enjoyment, Appreciation of Natural Quiet, and Appreciation of Historical Significance.

[6] This question was asked in a context of five potential impacts: Normal Conversation, Natural Quiet, Historical Significance, Park Scenery, and Hear Interpretive Programs.

opportunity for natural quiet, and to a greater degree, than believe aircraft interfere with enjoyment or historical significance. (These views, that aircraft most interfere with natural quiet, are confirmed by visitor surveys, see Section 3.1.4 and Chapters 6 and 9.)

As part of the third question, managers were also asked to rate the degree to which aircraft activity impacted four aspects of the visitors' experience besides natural quiet. Those additional aspects were normal voice conversation, historical significance of the park, enjoyment of the scenery, and the ability to hear interpretive programs. Figure 3.3 shows the managers' responses and puts the issue of natural quiet in perspective with these additional concerns. The length of each bar in the figure shows the percentage of managers who rated impact to be moderate to extreme for each aspect of the experience. In comparison with other potential impacts, natural quiet drew the highest percentage of responses.

Conclusion 3.1 **Preserving natural quiet is an integral part of the mission of the NPS. This is confirmed in law, policy, and the beliefs of NPS managers. Aircraft are judged by most managers to interfere with this opportunity, and interfere more with this opportunity than with other types of opportunities. The specific mandates and opportunities of individual parks to provide natural quiet need to be considered when estimating the severity of the effects of overflights.**

3.1.4 Importance of Natural Quiet to Park Visitors

A survey of visitors to the Grand Canyon (Baumgartner *et al.* 1994) showed how different visitor groups felt impact from aircraft overflights. Figure 3.4 provides information about five different Grand Canyon visitor groups: frontcountry visitors, summer and fall backcountry visitors, river users in motorized boats, and river users in oar-powered boats. For all groups, more visitors reported impact in terms of interference with natural quiet, than reported interference with enjoyment or annoyance.

Figure 3.4 shows also that overflights of the Grand Canyon produce greater impacts, in terms of percent of visitors who are affected, in the backcountry than in the frontcountry. Though the reasons for this greater impact cannot be determined, it is evident that backcountry use does not provide an escape from the impacts of overflights.

Conclusion 3.2 **Aircraft appear more likely to interfere with natural quiet for visitors than with visitor enjoyment or to produce annoyance. This relationship held true for Grand Canyon visitors, regardless of activity.**

3.2 What is Natural Quiet?

Parks and wildernesses offer a variety of unique, prisune sounds not found in most urban or suburban environments. They also offer a complete absence of sounds that *are* found in such environments. Together, these two conditions provide a very special dimension to a park experience.

The thermometer in Figure 3.5 is divided into two ranges. The upper half shows sound levels of typical non-park settings, and the lower half shows the ranges of sound levels measured in parks. At the high end of the non-park environments are outdoor settings in downtown areas of large, busy cities, such as New York, Chicago, or Washington, DC. Further down the scale are daytime suburban settings out-of-doors in areas around these cities, and even further down are out-of-doors suburban settings at night.

In the lower range are sound level environments found in parks. This range includes sound levels that most people who live in urban or suburban environments rarely encounter during their normal daily routines. At the upper end of this range are areas along a major river, such as the Colorado River in GCNP. In the middle of the range are scenic overlook areas where a few visitors may congregate at any one time, and areas along remote backcountry trails where encounters with other visitors are infrequent.

At the very bottom of the range are extremely quiet areas of parks or wildernesses generally devoid of vegetation or major terrain features which might generate noise from the wind or might support insect or animal populations. In the absence of wind, these locations have ambient levels very near the human threshold of hearing. Such environments may be found in places like Death Valley National Monument or in the crater of Haleakala National Park (where they have been measured with specialized instrumentation). To put the lower half of the figure in some perspective, sound levels in the 20 to 30 decibel range would be found late at night inside a single family residence, with all windows closed, no internal noise sources operating (such as heating or ventilating systems) and no local traffic in the vicinity.

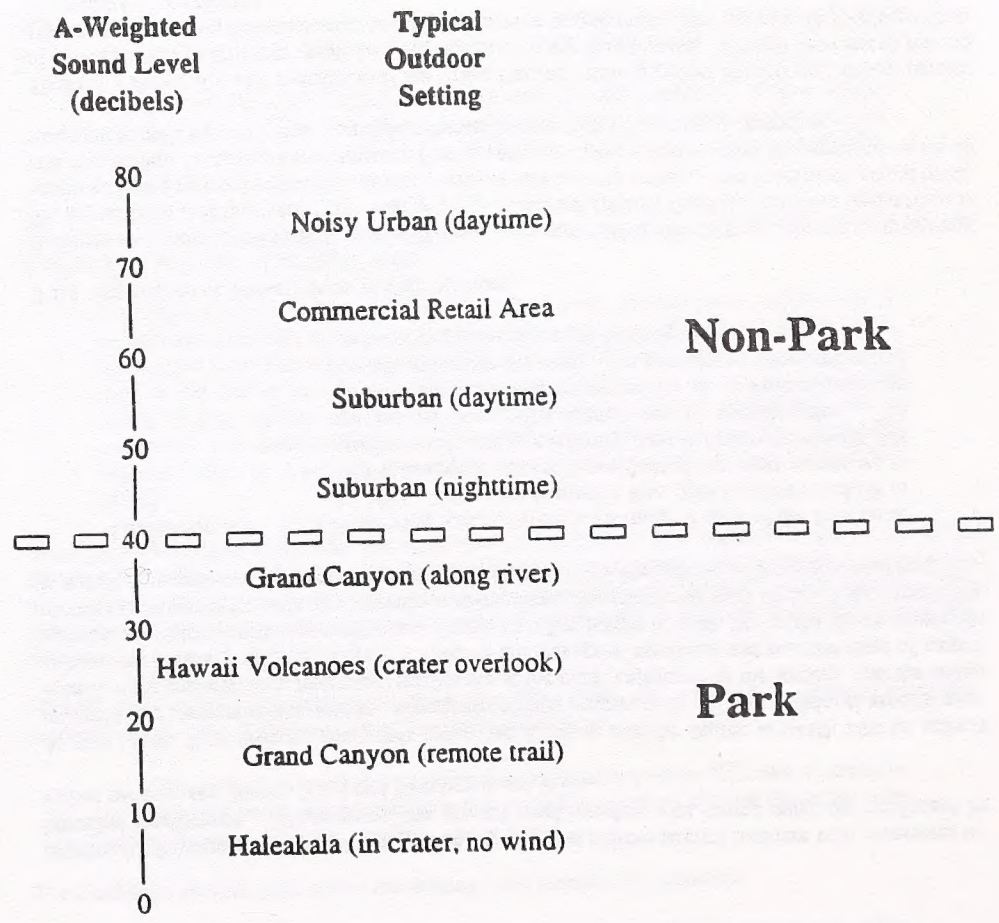
Some perspective on how quiet the natural environment of a park can be may be gained by comparing the two ranges in Figure 3.5. The relatively large sound level range (of roughly 40 decibels) that can be found between a busy downtown area and the suburbs at night, can also be found in park areas, but lying entirely below the lowest of the common outdoor sound levels in suburban environments. In such quiet park areas, it is not surprising that even relatively quiet aircraft can be heard at great distances.

Conclusion 3.3: **The quiet afforded in park settings is virtually in a range of its own, well below that which we experience in our normal daily routine.**

3.3 What Are the Characteristics of Natural Quiet?

Generally low sound levels, but with considerable variability over both time and location, characterize the ambient sound environments in many national parks. The rise and fall of the wind in a coniferous forest can change the ambient sound level over a matter of minutes at a single location. Likewise, the synchronized activity of insects such as crickets can produce substantial changes in the ambient sound environment as well.

From one location to the next, the proximity of vegetation and water, the local insect population (and its normal diurnal activity patterns), and the location's susceptibility to winds can give rise to large differences in ambient sound levels. Figures 3.6 through 3.8 show a range of ambient sound levels measured during the summer and fall of 1992 at a number of diverse locations in three parks. (Horonjeff *et al.* 1993) The bars in each figure show the range in sound levels observed 90 percent of the time during the measurements (5 percent of the time levels were higher than shown, and 5 percent of the time levels were lower than shown).



Sound Level Ranges for Some Park and Non-Park Settings

Figure 3.5 Sound Level Ranges Between Park and Non-Park Settings

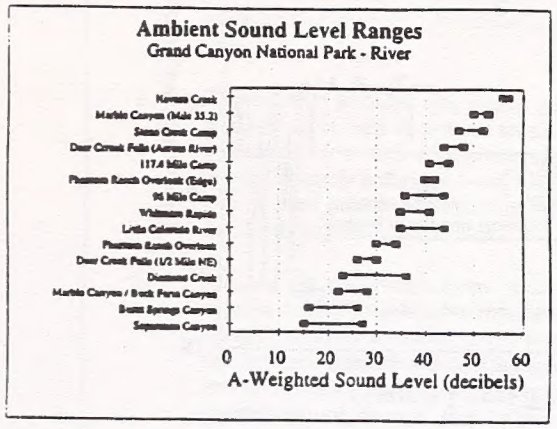


Figure 3.6. Measured Ambient Sound Levels Along Colorado River in Grand Canyon National Park

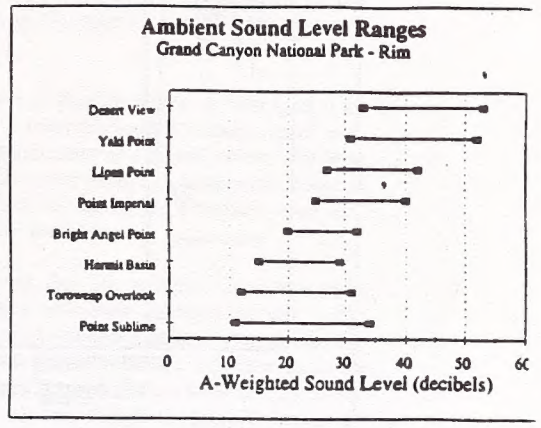


Figure 3.7. Measured Ambient Sound Levels Along the Canyon Rim in Grand Canyon National Park

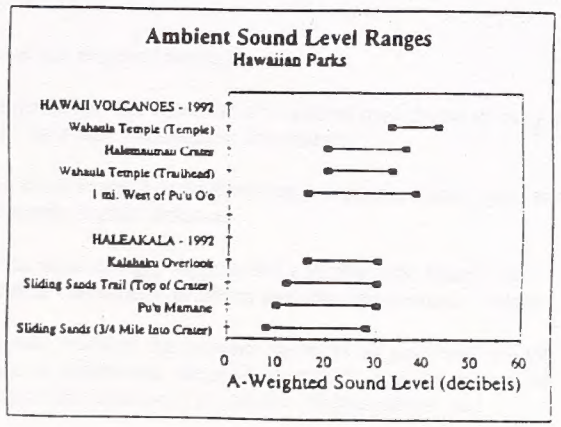


Figure 3.8. Measured Ambient Sound Levels in Hawaii Volcanoes and Haleakala National Parks

Looking at the three figures as a whole, a range of almost 50 decibels may be observed between the levels at Havasu Creek on the Colorado River and the lowest levels along Sliding Sands Trail in the crater of Haleakala National Park. Such a range is indicative of the differences to be found across the remote visitation areas of the park system. Within a single park the range can be almost as large. Generally speaking, at locations dominated by water noise, the range in ambient levels will generally be smaller (the 2 to 10 decibel ranges, as shown in Figure 3.6) than in other areas due to the consistency of water flow. In other areas the range is generally 15 to 20 decibels (Figures 3.7 and 3.8).

The relationship between these quiet settings and aircraft overflights is shown in Figure 3.9. The vertical axis of this figure shows the sound level in decibels, and the horizontal axis shows the passage of time over a 50 minute period. In the upper left portion of the figure, a 20-minute portion of a sound level trace obtained at the Great Meadows National Wildlife Refuge is presented. Great Meadows is located in a suburban area approximately 25 miles northwest of Boston, MA. The trace shows an ambient environment of 45 to 50 decibels, largely controlled by wind interacting with deciduous woods and distant road traffic. The trace also shows four single-engine propeller aircraft overflights which protrude 20 to 25 decibels above the ambient level, and are clearly audible in the ambient of Great Meadows.

To the right in the figure is a 30-minute trace showing helicopter and ambient sound levels at Haleakala National Park. The extreme quiet of the crater is exemplified by the ambient sound levels ranging from 7 to 27 decibels. The distant air tour helicopter at the beginning of the trace rises about 20 decibels above the ambient, and is clearly audible. The maximum level of this helicopter overflight is almost 10 decibels below the ambient at Great Meadows. Thus, the same helicopter overflight at Great Meadows would have been completely inaudible in that ambient environment.

Later in the Haleakala trace, a commercial jet aircraft overflew the crater and the maximum level exceeded the ambient by approximately 50 decibels. This event would have been noticeable in the Great Meadows environment as well as at Haleakala, but the protrusion of the sound event above the ambient is more pronounced at Haleakala, and is likely to be perceived as a greater intrusion. Immediately following the commercial aircraft overflight, a second air tour helicopter entered the crater area and began circling approximately one mile away. The maximum levels were about 30 decibels above the ambient and the aircraft was clearly audible. The same helicopter event in the presence of the Great Meadows ambient noise would have likely gone unnoticed.

Another important observation to be made from Figure 3.9 is the dynamics of the ambient sound level. While the *difference* between maximum and minimum ambient levels is different for the two environments shown, for each ambient the sound level consistently returns to within 2 or 3 decibels of the lowest levels every few minutes. Hence, in the absence of any other sounds, the visitor has a consistently recurring opportunity to experience and appreciate the quietest levels the particular location has to offer.

Conclusion 3.4: **Extremely low ambient sound levels in many parks means that visitors to remote sections of those parks are likely to hear aircraft, even if aircraft sound levels are very low.**

3.4 Why is it Difficult to Preserve Natural Quiet?

There are four primary reasons why natural quiet is difficult to preserve:

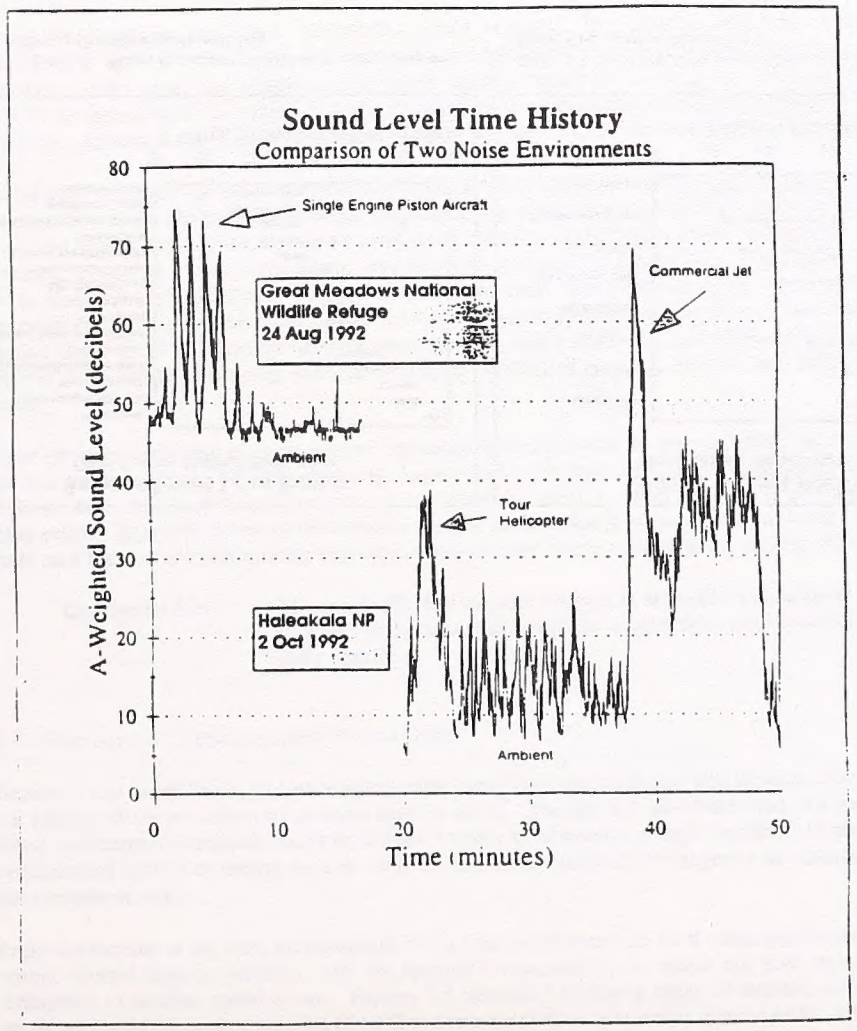


Figure 3.9. Protrusion of Aircraft Noise Above the Ambient in Various Settings

♦ Pressures to increase aircraft activity are on the rise in many parks (see discussions in chapter 8), and the NPS has no authority or influence over this activity.

♦ The quiet to be preserved is the lower end of the ambient sound level range that occurs regularly between wind gusts, animal sounds, etc., not just the average sound level.

♦ To provide a reasonable assurance that an aircraft will not be noticed by park visitors, the aircraft sound level cannot exceed the lowest levels of the ambient by more than a few decibels.

♦ The extreme quiet in many parks coupled with typical tour and commercial aircraft source levels require very large distances between the aircraft and the visitors to prevent audibility. (Anderson, G.S. *et al.* 1992)

With aircraft activity on the rise in many parks, without FAA assistance in regulating the increases, the amount of uninterrupted time available for visitors to notice, appreciate and contemplate the quiet of the park will decrease proportionately. While more flights do not necessarily mean higher sound levels, there are two inevitable outcomes of increased flights. First, if increasing numbers of flights are routed along a limited number of existing flight corridors, then the length or number of quiet interludes between flights will decrease. If additional flight corridors are opened to serve the rising demand, then new land areas will be affected and interludes of natural quiet will be reduced in new (and perhaps previously unaffected) areas as well.

With the exception of water-related sources, there are few naturally occurring sound sources in many parks which continually generate sound levels capable of masking the sound of nearby aircraft. Sources that do provide a predictable and constant level of masking sound generally do so to a fairly localized geographic area. High ambient levels from ocean surf, or from river rapids are usually limited to distances well under a mile, and therefore are of limited value in protecting large areas of a park from aircraft audibility.

Conclusion 3.5 **Preserving natural quiet is difficult because many park areas experience very low levels of ambient sound and aircraft are consequently audible at considerable distances (several miles).**

3.5 Aircraft Overflight Effects on Natural Quiet

When visitors can hear the sound of aircraft, natural quiet does not exist. Specific areas within specific parks provide the opportunity to experience natural quiet. Such areas, however, are likely to have very low ambient sound levels and hence, intruding sounds will be more easily heard. For these areas, actions are necessary to preserve the natural quiet resource. The NPS recognizes that achieving natural quiet will not always be possible at these locations. There are locations where intruding sounds cannot be eliminated. Local street traffic, other visitor-generated mechanical noises as well as aircraft can eliminate natural quiet. On the other hand, studies have shown that visitor judgment of the importance of natural quiet varies, probably as a function of the type of visitor activity, (see Figure 3.4), and hence, from the visitor perspective, natural quiet is not equally important in all locations or for all visitor activities.

In developing an approach to preserve natural quiet, the NPS recognizes the following five important facts:

1. Natural quiet is a resource for preservation within the NPS mandate.

2. The human auditory system is an excellent mechanism for determining the presence or absence of natural quiet. No readily available electronic device can duplicate human hearing for identifying audible sounds produced by non-natural sources.

3. The difficulty of preserving natural quiet is directly related to how quiet it is. If natural quiet, natural ambient sound, is relatively loud, as along a beach with pounding surf, or near a waterfall, then intruding non-natural sounds will have to be comparably loud to be heard. On the other hand, in a remote park location with no wind or water, or one with little or no vegetation or wildlife, even very quiet intruding non-natural sounds will be audible.

4. Humans are not always aware of sounds that are audible. Humans, when engaged in any number of activities, may have their attention focused on the activity and not be aware that a new sound has become audible. Visitors who for the first time view the Grand Canyon at Lipan Point are not very likely to remember hearing any aircraft. Only about 30 percent of the visitors interviewed reported hearing aircraft, (see Chapter 6) even though roughly 90 percent of them could have.

5. Park settings can provide levels of natural quiet so quiet that there is no sound to be heard except that generated by the listener - the sounds of walking, breathing, heart pumping, and blood flowing, (Figures 3.5 through 3.9).

3.6 Summary

The NPS studies discussed in this chapter demonstrate that:

A natural sound environment, and especially the extreme quiet found in many parks, is a resource valued by both park management and visitors.

The very low sound levels in many parks allow non-indigenous sounds, such as aircraft, to be clearly audible even at great distances.

The complexity of the issue strongly suggests that a system-wide framework is required with flexibility to define unique park problems and solutions because it would:

(1) carefully consider the resource values to be preserved and the types of experiences desirable to provide visitors, as well as consider the interests of the locally affected parties, and

(2) recognize both the visitation opportunities and variable visitor sensitivities in concert with the physical characteristics unique to each park location.

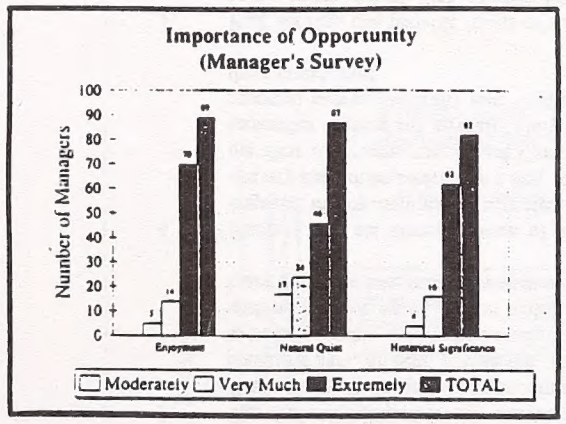


Figure 3.1. Importance to Management of Various Opportunities

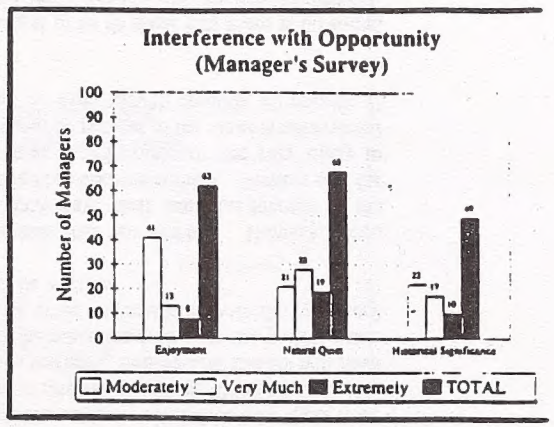


Figure 3.2. Management Perspective on Interference with Opportunities

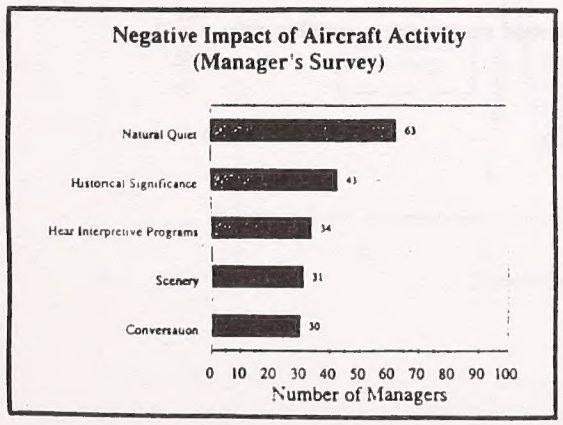


Figure 3.3. Management Reports of Aircraft Impact on Park Resources

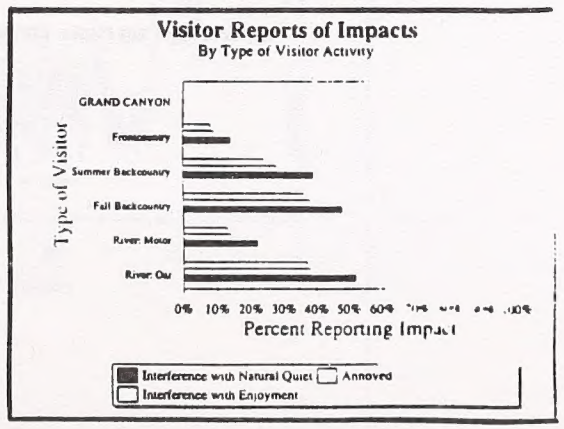


Figure 3.4. Grand Canyon Visitor Reports of Aircraft Impact on Park Resources

In considering any sound environment, it is often helpful to classify the components of the environment into one of two categories: those sounds that contribute to the more or less continuous background (ambient) sound environment (such as waves breaking on the shore, or a distant waterfall), and those sounds which are intermittent in nature (such as the call of a coyote, or the passing of a flock of vocal geese). This distinction is important, because it is the ambient environment that establishes the quieter moments in the park, and provides masking to intermittent sources (such as aircraft).

3.2.1 Qualitative Assessment of Natural Quiet

Quiet itself, in the absence of any discernable source (especially man-made), is an important element of the feeling of solitude. Quiet also affords visitors an opportunity to hear faint or very distant sounds (such as animal activity, waterfalls, etc.). Such an experience provides an important perspective on the vastness of the environment in which the visitor is located, often beyond the visual boundaries determined by trees, terrain, and the like.

The range in ambient sound levels, even from indigenous sources, can vary considerably from one location to another, or time to time at any given location. At one end of the spectrum is the sound level at the base of a powerful waterfall. At the other end of the spectrum is the near absence of any perceptible sound at all. These latter conditions may be found in areas devoid of flora or fauna. In the middle is an array of sound conditions which vary from moment to moment, hour to hour. During non-inclement weather conditions, these variations result from three factors in natural environments:

- Wind (its interaction with foliage, irregular terrain, or the human ear)
- Water (movement in steams, falls, or wave action)
- Animal (near continuous, such as insect; or intermittent, such as birds, coyotes, etc.)

Lulls in the wind or interludes between animal sounds create intervals where the quiet of a sylvan setting is quite striking. In considering natural quiet as a resource, the ability to hear clearly the delicate and quieter intermittent sounds of nature, the ability to experience interludes of extreme quiet for their own sake, and the opportunity to do so for extended periods of time is what natural quiet is all about.

3.2.2 Quantitative Assessment of Natural Quiet

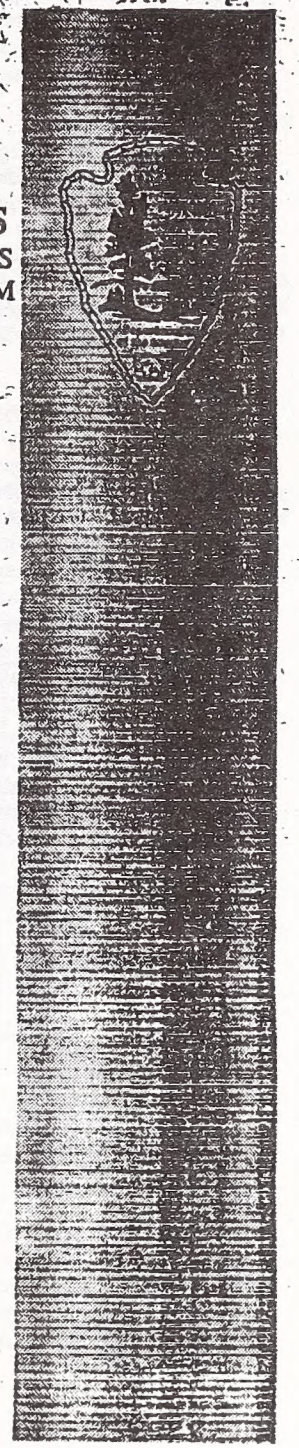
To provide a quantitative perspective on the quiet found in many parks, Figure 3.5 shows sound levels for a range of park and non-park settings in the form of an "acoustic thermometer." Values at the bottom of the thermometer are very quiet. In comparison, values at the top of the thermometer are much noisier. The sound levels shown on the thermometer are measured in decibels.

The "A-weighted sound level" title over the scale refers to an internationally recognized measurement standard that accounts for the different sensitivity of the human ear to different frequencies (pitches) of sound. This standard is used to assure that two different sounds which seem equally loud to a human observer will have very nearly the same measured sound level, in decibels[7].

[7] Technically, the specified ranges of Figure 3.5 may be thought of as identifying commonly occurring equivalent levels, L_{eq}, for the identified location and condition.

REPORT TO CONGRESS

REPORT ON EFFECTS OF AIRCRAFT OVERFLIGHTS ON THE NATIONAL PARK SYSTEM



PREPARED PURSUANT TO PUBLIC LAW 100-91,
THE NATIONAL PARKS OVERFLIGHTS ACT OF 1987

NATIONAL PARK SERVICE

September 12, 1994

CHAPTER 6

EFFECTS OF OVERFLIGHTS ON VISITOR ENJOYMENT

6.1 Introduction

Public Law 100-91 directs the Secretary of the Interior to study the effects of aircraft overflights at no fewer than ten units of the National Park System, and to provide information at each unit regarding

> *"... the impairment of visitor enjoyment associated with flights over such units of the National Park System."*

This chapter presents the results of two studies that were conducted in response to this requirement and that serve to identify the effects on visitors and also to provide a basis for using visitor reactions, as one measure among others, to identify, analyze and mitigate aircraft overflight sound produced impacts at units of the National Park system.

The two studies that serve as the basis for most of the analysis presented in this chapter are the Visitors Survey (McDonald *et al.* 1994) and the Dose-Response Study (Anderson *et al.* 1993). The Visitors Survey consists of two surveys of visitors: a visitor intercept survey conducted at exits to parks as visitors were departing, and a mail survey sent to a sub-group of these visitors. The Dose-Response Study included simultaneous sound level measurements and visitor interviews at specific sites which are overflown by aircraft on a regular basis. The Visitors Survey was designed to provide National Park system-wide estimates of visitor impacts, but the results also provide valuable information on the variation in effects from park to park. The Dose-Response Study examines visitor reactions to overflights of specific park locations and provides a quantitative relationship between aircraft sound level and visitors' reactions to these sound levels. The sections of this chapter examine in succession the effects on visitors system-wide, at specific parks, and at specific sites within parks. These effects, and in particular the results of the specific site Dose-Response Study, are then used as the basis for a process of identification, analysis and mitigation of overflight produced visitor impacts.

Understanding Visitor Enjoyment

In order to understand the following shifts of analysis from park system to individual parks to specific sites, it is necessary to understand how visitors report enjoyment and how the NPS views its mandate to provide for visitor enjoyment. In a recreational setting, visitor reports of enjoyment (or visitor satisfaction, as it is often termed in the literature) have two important qualities: 1) reports of satisfaction and dissatisfaction depend upon how specifically a visitor is questioned about an experience; 2) satisfaction cannot really be examined with a single measure, but consists of multiple satisfactions. First, previous work has shown that people evaluate their reactions to an event more reliably to the extent that they are questioned specifically about the event. In the context of examining the effects of overflights on visitors, questions asked about the effects of overflights at a specific site, asked right at the site were judged to provide more reliable reports of impact than questions asked at the time of exiting the park. Second, early research on visitor satisfaction centered upon a single measure of visitor satisfaction, but

more recent efforts have indicated that a single overall measure is inadequate, and now conceptualize visitor satisfaction as consisting of multiple satisfactions. In other words, impacts on visitors from aircraft are only one of numerous factors that can affect visitor enjoyment. To understand visitor reactions to aircraft, visitors must be questioned specifically about aircraft.

What these two aspects of visitor satisfaction mean is that impacts of overflights can not be easily perceived by broad-brush examination of visitor satisfaction long after the experience with overflights occurs. Rather, direct questions about the perceived effects of overflights have to be asked specifically and close to the time of the experience. Though the visitor survey was conducted primarily to permit generalization to the entire park system, it also provides useful information for understanding the differences in the impacts of overflights at different parks. The Visitors Survey had two parts, an initial intercept survey at park exits and a follow-up mail survey. Results of the intercept survey are more representative of visitor reaction to overflights and less affected by passage of time after the possible exposure to the overflights. The best time to ask opinions about overflights is to ask shortly after the experience, as was done during the dose-response study conducted at specific sites.

By examining the effects of overflights on visitor enjoyment system-wide, at individual parks and at specific sites within parks, the following conclusions are drawn:

System-wide, on an annual basis, about one-fifth of all park visitors (88 million) report hearing aircraft, and two to three percent (nearly 7 to 12 million visitors) report impacts from these overflights. These numbers take on greater significance when problems are concentrated in a limited number of parks. So while problems are spread widely enough to make a systematic approach desirable, they make simple systemic solutions, like the setting of a minimum flight altitude over parks, impractical and inappropriate. A systematic approach to problem solving must be linked to understanding impacts on a park-by-park, site-by-site basis with careful consideration given to the types of visitor experiences that the park should be providing.

Visitor impacts vary significantly park-to-park, and the parks included in the Visitors Survey demonstrate this variability. The variation in visitor impacts across these parks correlates, though weakly, with NPS management rankings of park overflight problems and add weight to the conclusion that the 50 to 100 parks identified by management may be in need of investigation and remedy.

Locations that have significant overflight problems can be objectively identified and analyzed by using NPS guidelines that include setting limits on percentages of visitors impacted and on numbers of visitors impacted.

6.2 The System-Wide Impacts of Overflights on Visitors

The Visitors Survey was designed to provide information system-wide about how visitors feel about aircraft overflight related issues. Three survey objectives relate to understanding effects on visitor enjoyment. These objectives are:

- Determine the importance of "natural quiet" to visitors.
- Determine the numbers and percentages of park visitors who remembered and reported hearing aircraft.

- Determine the numbers and percentages of park visitors who reported impacts from aircraft overflights.

In order to permit generalization of the results to the park system, a five-stage sample design was used. This involved selecting: (1) NPS units from identified strata, (2) two-month sampling periods, (3) exits and days, (4) groups of visitors within those exit-days, and finally (5) a subset of visitors to receive a questionnaire in the mail. The result was two sets of survey results: those from visitors who were intercepted and interviewed as they exited the various parks, and those from visitors who also received the mail questionnaire. In the following discussions, the results from the intercept or exit survey are used to provide information about the three survey objectives listed above[1]. These results are based on visitor responses collected during the busiest two months of the season from visitors exiting during the busiest 6 hours of the day.

6.2.1 Importance of Natural Quiet

During the intercept survey, visitors were asked how important it was to be able "to enjoy the natural quiet and sounds of nature" and "to enjoy the natural scenery" as reasons for their visit to the park. Visitors were given five choices for responding: not at all important, slightly important, moderately important, very important and extremely important. Table 6.1 shows, based on the survey responses, what percent and what corresponding annual number of park visitors could be expected to answer moderately, very or extremely important to these reasons.

Table 6.1 Importance of Natural Quiet and Natural Scenery as Reasons for Park Visit

Reason for Park Visit	Estimate	95% Confidence Interval
Enjoy Natural Quiet		
Percent of Visitors[a]	90.7%	88.3% to 93.1%
Number of Visitors[b]	397.1 M	386.6 M to 407.6 M
Standard Error[c]	1.23	
(n=15,150)[d]		
View Natural Scenery		
Percent of Visitors[a]	93.2%	91.3% to 95.1%
Number of Visitors[b]	408.0 M	399.7 M to 416.3 M
Standard Error[c]	0.98	
(n=15,227)[d]		

a Respondents who answered 3,4, or 5 on the following scale: 1=not at all important, 2=slightly important, 3=moderately important, 4=very important, and 5=extremely important.

b Estimate of the 1992 visitor population is 437.8 million visitors. As used here, "visitor"

[1] The mail survey results provide information about visitor perceptions of benefits and about approaches to management presented in Chapters 8 and 9.

means one person exiting the park. Hence, if a person enters and leaves a park once each day for three days, that person is counted as three "visitors"

[c] Standard error is of the percent, not of the number of visitors.

[d] Number of completed interviews.

Conclusion 6.1 **Enjoying the natural quiet is about as important as viewing natural scenery as a reason for visiting national parks. In both cases over 90 percent of the visitors report moderate to extreme importance for both.**

6.2.2 Impacts Produced by Hearing and Seeing Aircraft

First, visitors leaving the parks were asked if they heard or saw "any airplanes, jets, helicopters or any other aircraft during your visit to" the park. Table 6.2 presents the results and estimates of the corresponding number of 1992 visitors who would have heard or seen aircraft.

Table 6.2 Numbers of Visitors who Reported Hearing or Seeing Aircraft

	Estimate	95% Confidence Interval
Heard aircraft		
Percent of Visitors[a]	20.1%	10.1% to 30.1%
Number of Visitors	88.0 M	44.2 M to 131.8 M
Standard Error	5.10	
(n=15,190)		
Saw aircraft		
Percent of Visitors	18.8%	10.8% to 26.8%
Number of Visitors	82.3 M	47.3 M to 116.3 M
Standard Error	4.10	
(n=15,081)		

[a] See notes to Table 6.1.

Conclusion 6.2 **About one fifth of all visitors to the National Parks (about 80 million visitors a year) remember seeing or hearing aircraft during their visit to the park.**

Visitors who reported hearing or seeing aircraft were then asked whether they were bothered or annoyed by aircraft noise or by seeing aircraft. Visitors who heard aircraft were also asked whether the sounds of aircraft interfered with three aspects of their visit: enjoyment of the park; appreciation of the natural quiet and sounds of nature at the park; appreciation of the historical and/or cultural significance of the park. Visitors could respond with one of five answers for each question: not at all, slightly, moderately,

very much, extremely. Table 6.3 gives the impacts for hearing aircraft, and Table 6.4 shows the reported annoyance for visitors who saw aircraft. The percents shown are percents of the total visitor population, not percents of visitors who heard or saw aircraft.

Table 6.3 Impacts that Resulted from Hearing Aircraft

Type of Impact	Estimate	95% Confidence Interval
Interfered with Visitor Enjoyment		
Percent of Visitors[a]	1.9%	0.6% to 3.2%
Number of Visitors	8.3 M	2.6 M to 14.0 M
Standard Error	0.65	
(n=15,150)		
Annoyed by Hearing Aircraft		
Percent of Visitors	1.6%	0.1% to 3.1%
Number of Visitors	7.0 M	0.4 M to 13.6 M
Standard Error	0.77	
(n=15,174)		
Interfered with Appreciation of Natural Quiet		
Percent of Visitors	2.8%	0.9% to 4.7%
Number of Visitors	12.3 M	3.9 M to 20.6 M
Standard Error	0.99	
(n=15,049)		

[a] See notes to Table 6.1.

Table 6.4 Annoyance that Resulted from Seeing Aircraft

Type of Impact	Estimate	95% Confidence Interval
Annoyed by Seeing Aircraft		
Percent of Visitors[a]	3%	1.3% to 4.7%
Number of Visitors	13.1 M	5.7 M to 20.6 M
Standard Error	0.86	
(n=15,072)		

See notes to Table 6.1.

Conclusion 6.3 **About 2 to 3 percent of all visitors, or roughly from 7 to 13 million visitors annually, can be expected to report impact from hearing or seeing aircraft overflights.**

6.2.3 Impacts Among Different User Groups Produced by Hearing Aircraft

Impacts of overflights on different user groups were also examined. Three visitor groups were identified: frontcountry, backcountry, and overnight backcountry permit holders. Visitors who completed the exit survey could be categorized based on their primary recreational activity. Those who indicated their primary activity was backpacking or hiking were classified as "backcountry" users, while all other surveyed visitors were classified as "frontcountry". The third group, the backcountry permit group, is a sample of permit holders from those NPS units that require a permit to stay overnight in the backcountry. These permit holders were surveyed by mail.

Figure 6.1 shows the percentages of visitors in each of the three groups who remembered and reported hearing aircraft, who were annoyed, who indicated aircraft sound interfered with their enjoyment, and who indicated aircraft sound interfered with their appreciation of natural quiet and sounds of nature. Frontcountry visitors are less likely to report hearing aircraft, and to be less impacted by aircraft sounds than backcountry visitors. Such differences could be attributed to a number of factors. First, aircraft may be less likely to fly at lower altitudes near more populated frontcountry areas, possibly avoiding areas where typical frontcountry activities occur. Second, backcountry visitors may spend a much longer period of time in the park, thus increasing their opportunities to hear aircraft. Third, backcountry visitors typically spend a greater portion of their visit away from crowds, traffic, noise, etc., in locations where aircraft sounds may be more intrusive. Fourth, previous research has shown that backcountry and frontcountry visitors generally have different expectations and are seeking different experiences in visits to national parks.

Conclusion 6.4 **A higher percentage of backcountry than frontcountry visitors report hearing aircraft and are more likely to experience impact from these aircraft. Though the reasons for these differences have not been identified, it is clear that hiking and backpacking do not remove visitors from the impacts of overflights.**

6.3 Impacts at Specific Parks and at Specific Sites

The previous section presented the broad, system-wide picture of the impacts on visitors produced by aircraft overflights. However, both the Visitors Survey and the Dose-Response Study provide more information about visitor reactions to overflights, the distribution of overflight impacts on visitors, the relation of sound level to visitor reaction, and factors affecting visitor reactions. This section presents this additional information by examining the study results for specific parks and for specific sites within parks.

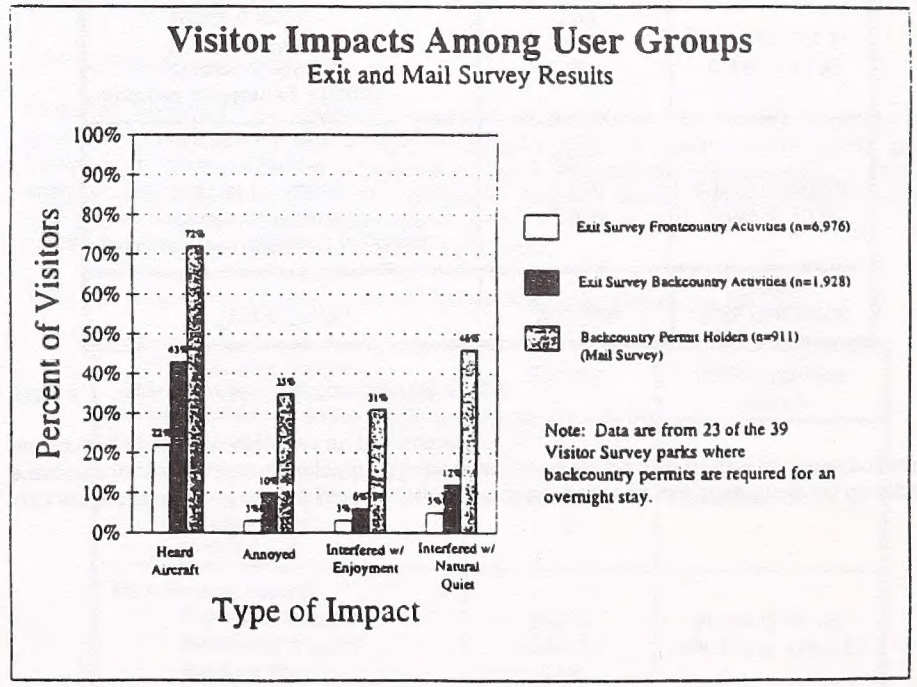


Figure 6.1 Impacts of Hearing Aircraft Among Different Visitors Groups

6.3.1 Impacts at Specific Parks

Percentages of Visitors Impacted

The Visitors Survey was conducted at a carefully designed and selected sample of units of the National Park System. This sample was drawn to permit generalization of results to the entire non-Alaskan system of parks. However, examination of the data from these individual parks indicates that a wide variation in overflight produced impacts exist. Table 6.5 lists the parks where visitors were surveyed. It gives also the numbers of visitors who were surveyed as they exited the park, and the percent of visitors, weighted to reflect the total number of visits during the two month survey period, who expressed annoyance, stated that the sound of aircraft interfered with their enjoyment of the park or with their appreciation of the natural quiet and sounds of nature.

Table 6.5 Reported Exposure and Impact from Hearing Aircraft at Visitors Survey Parks

National Park Unit Surveyed		Number of Visitors Interviewed	Percent[a] of Visitors Reporting			
			Hearing Aircraft	Annoyance[b]	Interference with	
					Enjoyment[b]	Natural Quiet[b]
1	Assateague Island NS	516	29	1	<1	3
2	Bandelier National Monument	424	34	3	1	3
3	Buffalo National River	171	40	4	4	5
4	Canaveral National Seashore	252	32	<1	2	4
5	Cape Cod National Seashore	290	44	2	4	4
6	Cape Hatteras NS	280	37	<1	1	2
7	Casa Grande NM	490	5	1	1	1
8	Cumberland Island NS	703	82	19	15	26
9	Delaware Water Gap	277	22	1	1	2
10	Dinosaur National Monument	598	8	1	1	2
11	Everglades National Park	268	49	17	17	21
12	Fort Sumter NM	474	17	1	<1	2
13	Fredericksburg & Spotsylvania	230	36	11	6	12
14	Gettysburg NMP	356	16	1	1	2
15	Glacier National Park	404	29	2	3	5
16	Glen Canyon NRA	285	52	4	4	8

National Park Unit Surveyed		Number of Visitors Interviewed	Percent[a] of Visitors Reporting			
			Hearing Aircraft	Annoyance[b]	Interference with	
					Enjoyment[b]	Natural Quiet[b]
17	Grand Canyon National Park	536	34	5	5	10
18	Great Smoky Mountains NP	266	12	1	1	3
19	Gulf Islands National Seashore	356	64	3	5	8
20	Haleakala National Park	533	47	6	6	12
21	Hawaii Volcanoes NP	550	48	7	7	12
22	Hot Springs National Park	623	13	1	1	1
23	Kings Canyon & Sequoia NP	304	13	3	3	5
24	Lake Mead NRA	199	32	1	2	3
25	Lake Meridith NRA	188	10	<1	1	1
26	Lassen Volcanic NP	384	19	4	2	5
27	Mount Ranier National Park	390	23	5	4	6
28	Mount Rushmore NM	530	61	9	10	17
29	North Cascades NP	437	17	2	3	5
30	Olympic National Park	203	33	8	5	12
31	Perry's Victory	500	29	1	3	4
32	Rocky Mountain NP	501	11	1	1	2
33	Saguaro National Monument	270	21	3	5	7
34	Shenandoah National Park	458	13	4	4	5
35	Sleeping Bear Dunes NL	372	16	1	2	3
36	Walnut Canyon NM	542	11	1	2	4
37	Wilson's Creek NB	453	19	1	2	3
38	Yellowstone National Park	394	18	1	1	1
39	Yosemite National Park	337	55	15	14	19

[a] Percents are based on weightings using actual numbers of visitors to each park during the survey periods.
[b] Respondents who answered 3,4, or 5 on the following scale: 1=not at all, 2=slightly, 3=moderately, 4=very much and 5=extremely.

Conclusion 6.5 **Park visitor reports of exposure to aircraft (hearing aircraft) and of impacts from the exposure vary widely from park to park.**

Figure 6.2 presents graphically for each of the Visitors Survey parks two of the quantities listed in Table 6.5: percent of visitors who reported hearing aircraft and the percent of visitors who were annoyed. The numbers next to the points in the figure indicate the specific park as listed in Table 6.5. As shown, parks with higher percentages of visitors reporting hearing aircraft also tend to have larger percentages of visitors annoyed by the aircraft.

Low percentages of visitors impacted in Table 6.5 and Figure 6.2 do not necessarily imply no overflight noise problems exist. First, the Dose-Response Study, discussed in more detail below, shows that significant impacts to visitors can occur at specific sites. Figure 6.3 shows the same variables, percent who heard aircraft and percent who were annoyed, for five specific sites. Haleakala, Hermit Basin (in the Grand Canyon), and Wahaula (Hawaii Volcanoes) all showed more than 20 percent of the visitors to these specific sites were annoyed. In Figure 6.2, Haleakala, number 20, Grand Canyon, number 17, and Hawaii Volcanoes, number 21, all show less than 10 percent of visitors reporting annoyance with the sound of aircraft overflights. If parks such as these that show 5 to 10 percent of the visitors are impacted can also have sites in the park where more significant numbers are affected, it is likely that the parks of Figure 6.2 that have more than 10 percent of visitors annoyed also have specific sites where significant percentages of visitors are impacted.

Conclusion 6.6 **The nature and severity of impacts at specific sites within parks may not be captured by the judgments gathered in the exit Visitors Survey.**

Numbers of Visitors Impacted

The impacts of overflights at the specific parks may also be examined by estimating the numbers of visitors annoyed during the two month sample periods. Figure 6.4 is like Figure 6.2, except estimated numbers of visitors are used rather than percents of visitors. Note that Grand Canyon, 17, Haleakala, 20, and Hawaii Volcanoes, 21, all are estimated to have more than 10,000 visitors impacted during the two month survey period. Table 6.6 lists the parks of Figure 6.4 having more than 10,000 visitors impacted.

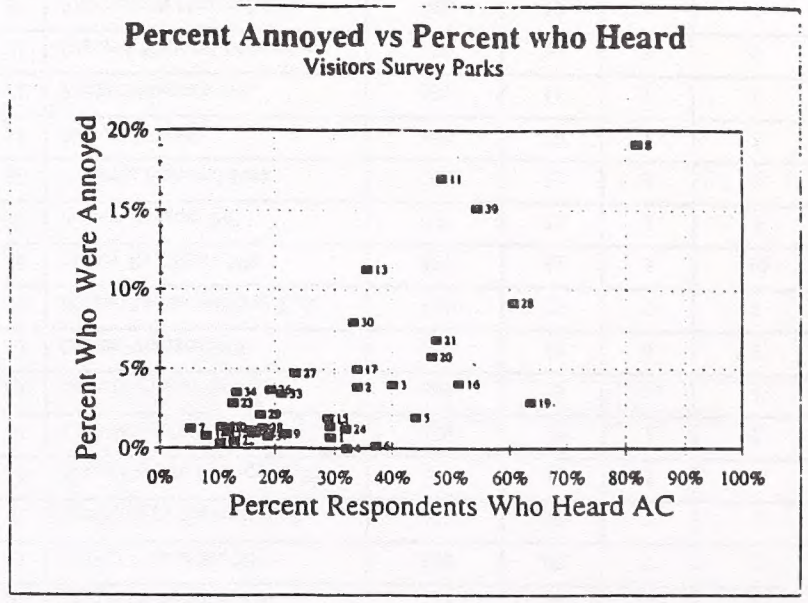


Figure 6.2 Percent of Visitors Hearing Aircraft and Annoyed by Aircraft at Visitors Survey Parks

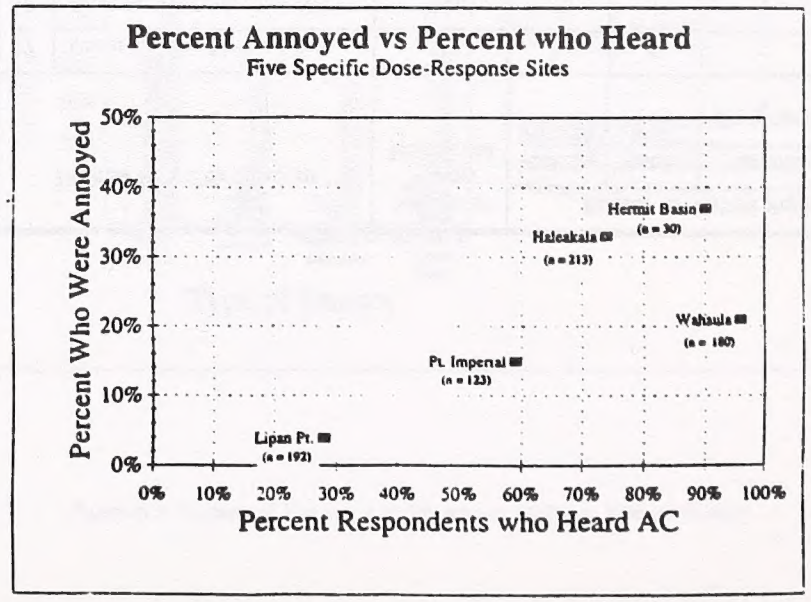


Figure 6.3 Percent of Visitors Hearing Aircraft and Annoyed by Aircraft at Five Specific Sites

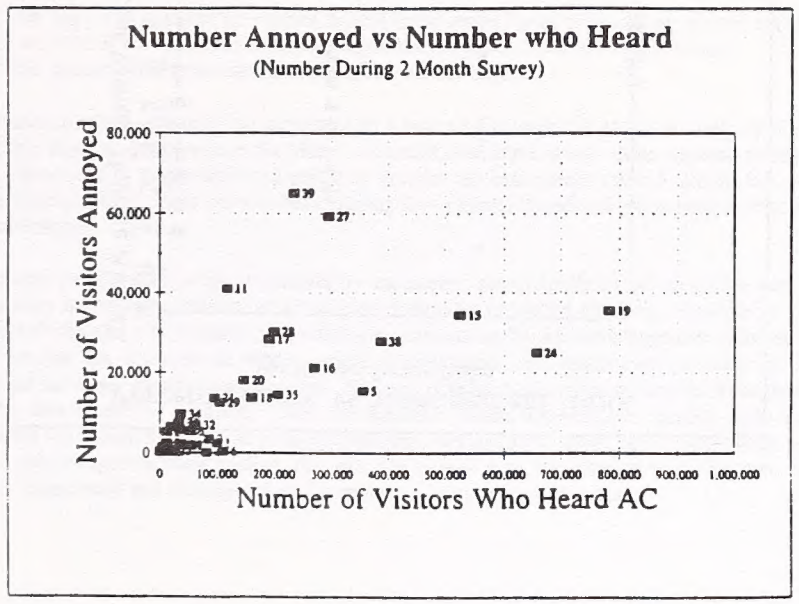


Figure 6.4 Numbers of Visitors Hearing Aircraft and Annoyed by Aircraft at Visitors Survey Parks

Table 6.6 Visitor Survey Parks with More than 10,000 Visitors Impacted by Overflights During Survey

	National Park Unit
5	Cape Cod National Seashore
11	Everglades National Park
15	Glacier National Park
16	Glen Canyon NRA
17	Grand Canyon National Park
18	Great Smoky Mountains NP
19	Gulf Islands National Seashore
20	Haleakala National Park
21	Hawaii Volcanoes NP
24	Lake Mead NRA
27	Mount Rainier National Park
28	Mount Rushmore NM
29	North Cascades NP
35	Sleeping Bear Dunes NL
38	Yellowstone National Park
39	Yosemite National Park

Comparison of Park Specific Impacts with Management Ratings

Three different rankings of parks with potential overflight problems were developed. First, the National Park Service developed a ranking from 1, most severe, to 9, the least severe for parks within each NPS region. Second, NPS developed a national ranking from 1, greatest potential for aircraft overflight exposure, to 3, the least potential. Third, a ranking of "exposure" was developed based on limited information about flight routes and air traffic information (Tabachnick *et al.* 1992). These three rankings were examined for correlation with visitor reports of hearing aircraft, and with visitor reports of impact (McDonald *et al.* 1994). Modest correlations were found for the NPS management rankings and hearing aircraft, and weak correlations with impact (annoyance, interference with enjoyment or with appreciation of natural quiet). The exposure metric, developed from incomplete information about routing of flights and operations numbers, correlated to little or no extent with visitor responses.

Figures 6.5, 6.6 and 6.7 show the relationship of the NPS national ranking and the parks included in Pubic Law 100-91 with hearing aircraft and annoyance for the parks of the Visitors Survey. These figures show the tendency for the higher ranked parks to be parks were greater percentages of visitors report hearing aircraft and where greater percentages or numbers of visitors are impacted by hearing aircraft. Reasons for differences between management rankings and visitor reactions can be many: management knows the purpose and mission of the parks; visitors are at parks generally a few days at most; visitors have limited experience with the opportunities offered by the park. Nevertheless, very few of the parks with the higher visitor impacts are excluded from the higher management rankings.

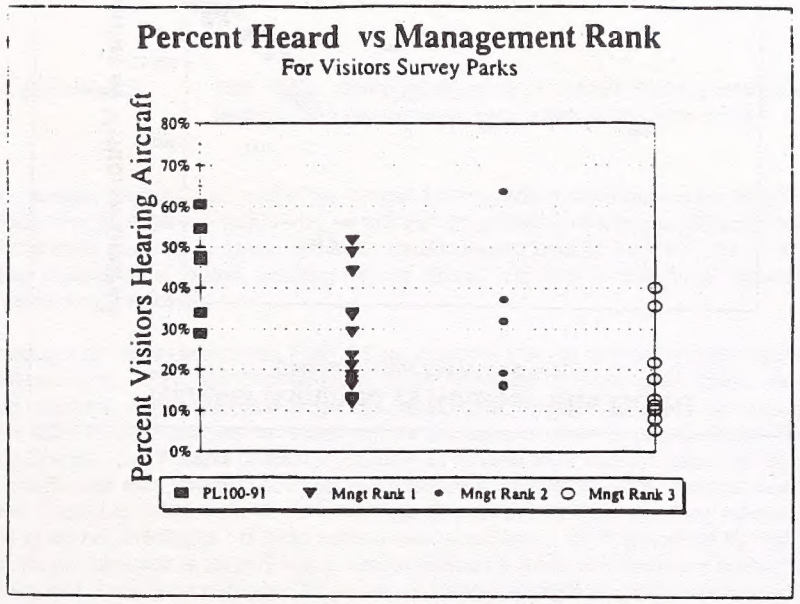


Figure 6.5 Comparison of NPS Management Rankings with Percent of Visitors Hearing Aircraft

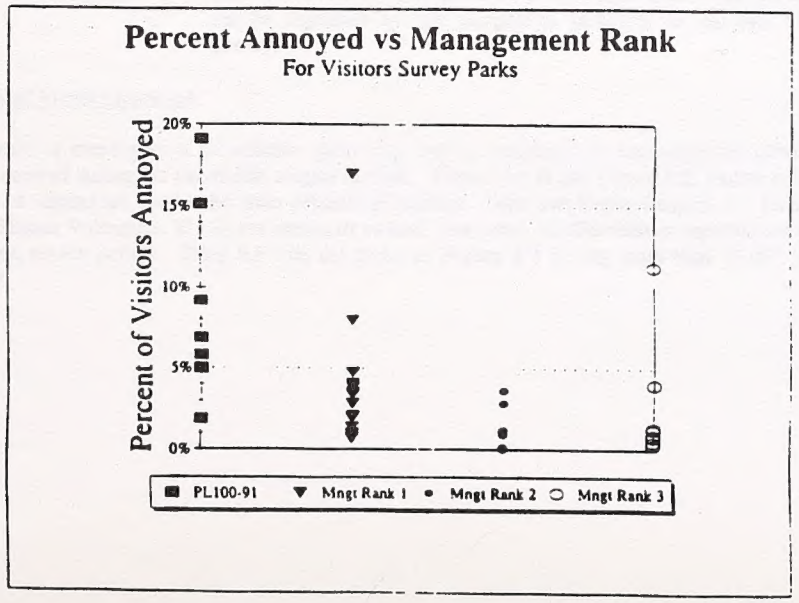


Figure 6.6 Comparison of NPS Management Rankings with Percent of Visitors Annoyed

Figure 6.7 Comparison of NPS Management Rankings with Number of Visitors Annoyed

Conclusion 6.7 **NPS management rankings provide a reasonable approach to identifying parks with potential overflight problems, and the management perspective is likely to identify the parks with the most severe visitor impacts.**

6.3.2 Impacts at Specific Sites

The preceding sections of this chapter presented visitor perceptions of overflight impacts for the park system as a whole, and showed the variation in visitor perceptions from park to park. Since the Visitors Survey could not identify what sound levels the visitors experienced, where they went in the parks, or how long they stayed in different areas of the park, there is no means for inferring this information, and no way to answer questions that would help quantify the relationship between visitor reports of impact and aircraft sound level. Since the Visitors Survey could not provide any information about sound levels experienced by visitors, the Dose-Response Study (described in Anderson *et al.* 1993) was designed and conducted to answer the following three questions.

1. Does impact as reported by visitors depend upon sound levels produced by aircraft overflights?
2. If so, what is the relationship between reported impact and aircraft sound levels?
3. What factors other than aircraft sound affect visitor impacts?

A dose-response relationship may be thought of as a curve on a graph that tells what percent of visitors report impact (their response) versus the "dose" of aircraft overflight sound. Dose-response relationships have long been used to help understand reactions to noise in communities around airports but, prior to this dose-response study, there were no data relating how visitors to national parks react to the sound of aircraft overflights.

Dose-response relationships were developed by measuring sound levels in an area of a park while simultaneously interviewing visitors who had passed through or visited the area. Preparation for data collection and analysis was lengthy, and was highly influenced by the knowledge that, although dose-response studies are common in urban airport environments, this exact type of study in a park environment had never before been attempted. Hence, decisions were made to maximize the likelihood that useful data would be acquired. Such an approach meant that variables needed to be limited, measurement techniques had to be as simple as possible, and that study areas had to be carefully chosen. Table 6.7 lists the specific areas studied, the park, the type of area, the dates of data collection, number of visitors interviewed and the approximate numbers of aircraft heard per hour.

Table 6.7 Dose-Response Data Collection Study Areas

National Park	Study Area	Type of Area	Dates of Data Collection (1992)	No. of Visitors Interviewed	Aircraft per Hour (approx.)
Grand Canyon	Havasu Creek	Backcountry, stopping point	27, 28, 29, 30 Aug.	30	9
Grand Canyon	Point Imperial	Frontcountry, overlook	5, 6 Sep.	124	22
Grand Canyon	Hermit Basin	Backcountry, trail segment	25 Aug. 1, 2, 3 Sep.	32	31
Grand Canyon	Lipan Point	Frontcountry, overlook	24, 26, 31 Aug.	193	24
Haleakala	Sliding Sands Trail	Frontcountry, short hike	2, 3, 4, 5 Oct.	213	8 to 10
Hawaii Volcanoes	Wahaula Temple	Frontcountry, short hike	8, 9, 10, 11 Oct.	180	9 to 10

The Dose-Response Curves

Figures 6.8 and 6.9 present dose-response curves that were developed from the data for each of the study areas[2]. In each, the horizontal axis gives the dose, while the vertical axis gives the response, and the curves show the relationship between the two. The two figures are for two doses and one response. The doses are percent of time aircraft are audible, and hourly equivalent level, $L_{eq,1hr}$ for audible aircraft[3]. The first, percent of time audible, was determined by logging the start and end times of all audible aircraft overflights. These logs were later correlated with the period of time each interviewed visitor was on site to determine the amount of time each visitor could have heard aircraft. The $L_{eq,1hr}$ was determined by continuously measuring sound levels, then computing for 1 hour periods for each visitor.

---

[2] Because of the limited number of interviews at Havasu Creek and because aircraft sound levels were so close in level to the non-aircraft background levels that doses could not be computed, the Havasu Creek data could not be used in developing the dose-response curves.

[3] Percent of time aircraft are audible, while simple to measure, is extremely difficult to predict. On the other hand, measurement of $L_{eq,1hr}$ of audible aircraft is somewhat difficult, but reasonably easy to predict with current available computer models. Hence, dose-response curves for both metrics have been developed to provide the tools necessary for measurement, analysis and mitigation of overflight noise problems in parks, see section 6.4. $L_{eq,1hr}$ is the computed dose that occurred during the hour that the visitor was at the site. Use of this dose for assessing a site assumes that the relationship between $L_{eq,1hr}$ and the actual dose received by the visitor at the site is similar to the relationship at the dose-response sites were the data were collected.

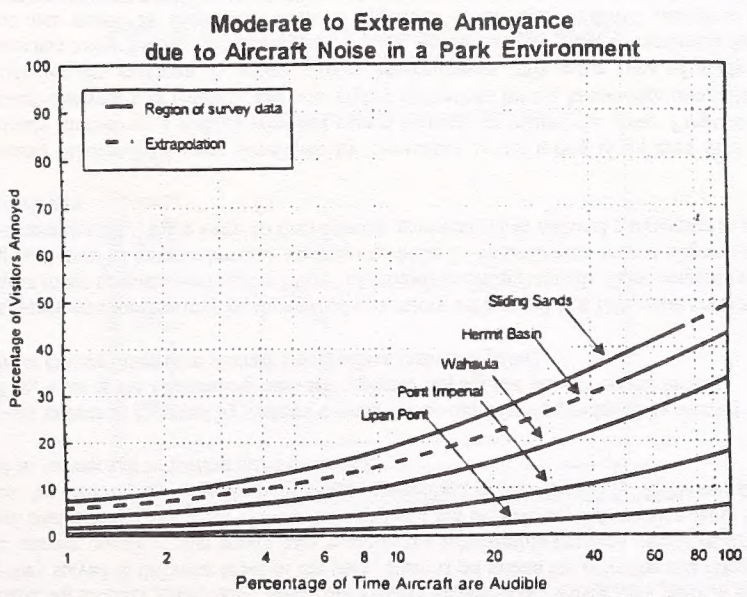


Figure 6.8 Dose-Response Curve for Visitor Annoyance vs Percent of Time Aircraft are Heard

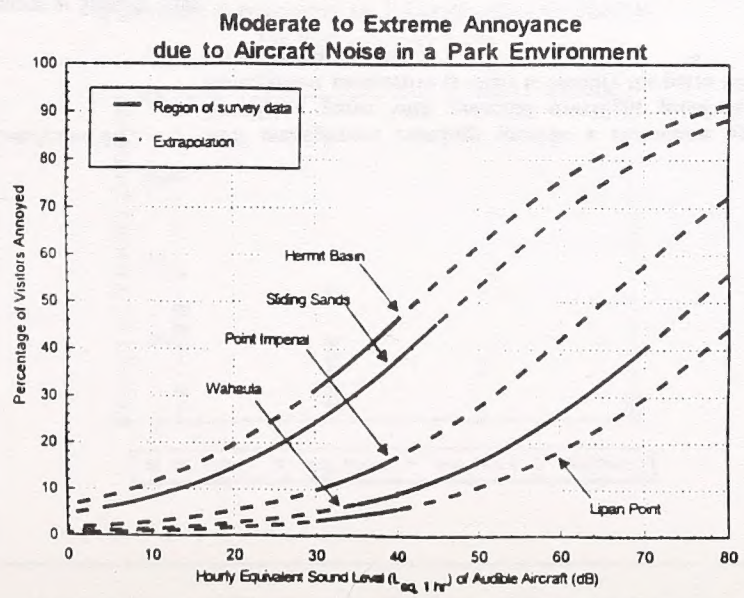


Figure 6.9 Dose-Response Curve for Visitor Annoyance vs Hourly Equivalent Sound Level

the equivalent level of the sound levels that occurred when aircraft were audible (corrected for non-aircraft sound levels). The response is percent of visitors who said they were annoyed by aircraft noise while at the site[4]. The solid portion of the curve shows where the data lie, the dashed portions are extrapolations based on analysis.

The dose-response curves, to the extent that they are applicable to a given site, can be used to predict visitor responses (impacts) by measuring (or predicting) dose. For example, if monitoring at a site similar to Sliding Sands shows aircraft audible about 30 percent of the time, then Figure 6.8 predicts that about 32 percent of the visitors will be annoyed. Alternatively, if $L_{eq,1hr}$ of 40 dB from audible aircraft were measured or predicted for the site, Figure 6.9 shows that about 37 percent of the visitors will be annoyed. Thus through measurement and/or prediction, the magnitude of the visitor impacts may be determined. Analytical methods can then be used to identify possible solutions. Section 6.4 below discusses such a monitoring, analysis and mitigation process in more detail.

Conclusion 6.8 **Visitors report negative reactions to the sound of aircraft at specific sites, and these negative reports increase as exposure to aircraft sounds increase.**

These curves demonstrate that sound exposure, though an important variable, is not the sole determinant of impact on visitors. Not only do the impacts on visitors clearly vary considerably from one site to another, but statistical testing of the data has shown that several other specific factors affect visitor response. Though the importance of these factors varies depending upon which dose and which response are examined, some generalizations are possible. First time visitors to a site are less sensitive to aircraft sound than are repeat visitors; visitor "groups" of one or two people are more sensitive than are larger groups; visitors who thought enjoying the natural quiet and sounds of nature was a very or extremely important reason for visiting the site were more sensitive to aircraft sound than visitors who judged quiet and sounds of nature as less important. These three factors can have a significant effect on visitor response. Repeat visitors, or groups of 1 or 2, or visitors who rate quiet as very important respond as if the sound were about two to three times as long or about 20 dB louder when compared with first time visitors, larger groups, or visitors who do not so highly value quiet.

The dose-response data also suggest other factors that may be important in affecting how visitors respond, but lack of data prevented developing statistically verifiable results. The type of site is clearly important, since the curves vary from site to site; what is unknown is what characteristics of the site are important. For example, the non-aircraft sound levels at a site seem to affect response, the higher the non-aircraft sound levels, the less the visitor response. Sites that are more easily accessible seem to be visited by a population of visitors that are less sensitive to aircraft sounds; conversely, the less accessible sites, where visitors must walk some distance, may attract more sensitive groups of visitors. Virtually all overflights

[4] The response of annoyance rather than interference with enjoyment was chosen for two reasons. Primarily, annoyance is the metric of response that has been used for almost two decades to assess the impact of intruding sounds, and particularly aircraft sounds on humans. The use of annoyance thus continues a well-established approach. Second, visitor impact in terms of annoyance and in terms of interference with enjoyment have proven to be virtually identical, see for example Table 6.5. Curves were also developed for the dose of interference with the natural quiet and sounds of nature.

were light tour propeller and helicopter aircraft, flying at moderate altitudes (less than 1000 to 2000 feet, but generally higher than several hundred feet); visitor responses to aircraft at very high or very low altitudes, or to other types of aircraft, especially jets, are unknown. More data are needed if these factors are to be reliably identified and quantified.

Conclusion 6.9 **Dose-response curves quantify the relationships between overflight sound levels and visitor impacts. Not all non-sound level factors that influence visitor impacts can be identified, but sufficient information is available that careful use of the dose-response curves can identify sites likely to produce significant impacts on visitors.**

6.4 Identification, Analysis and Mitigation of Impacts

When used in conjunction with NPS management judgement, the dose-response results provide a means for quantitatively identifying and rank ordering sites within parks that potentially produce significant impacts on visitors. This section presents in outline form a method that can be used for the process of identification, analysis and mitigation of the types of visitor impacts discussed in previous sections of this chapter.

6.4.1 Identification

NPS management judgement and priority setting provide the primary basis for initial identification of units of the National Park System likely to have areas where overflights are producing significant visitor impacts. Not only does the management perspective consider the purposes, resources and intended recreational opportunities of the parks but, as discussed above in section 6.3.1, the management perspective as reflected in the NPS management rankings of parks demonstrates some correlation with the impacts reported by visitors for the Visitors Survey parks. Hence, the first step in identification of potential problem areas is to use the management rankings of highest concern parks (50 to 100 parks), identify the top priority parks for problem solving, and then identify the most impacted sites within them.

Identifying candidate sites within the priority parks will require an orderly identification of site characteristics. Important criteria for consideration will include:

1. Frequency of Overflights - How many overflights per hour occur regularly during periods of visitation?
2. Visitation Rates - How many visitors per hour or per day pass through the candidate site?
3. Recreational Opportunity - What are the important dimensions of the intended opportunity: unobstructed views, solitude, remote location, transportation access, etc.?

Once candidate sites are identified, the dose-response curves based on the percent of time aircraft are audible can be used by park personnel to develop a quantitative evaluation of the site. Percent of time audible data can be easily collected and compared with an appropriate dose-response curve for the site. Ideally, the curve used would be the one derived from the dose-response site most similar to the site in question. However, to simplify selection of the appropriate curve, Figures 6.10 and 6.11 have been developed. Each provides a curve for two generic types of sites: short-hike (or backcountry) and overlooks (or front country) sites. The "Short-hike Sites" curves are derived from the results obtained at Hermit Basin, Sliding Sands Trail and Wahaula Temple, weighted for sample size and statistical reliability. The "Overlooks curves" are similarly derived from the Point Imperial and Lipan Point data.

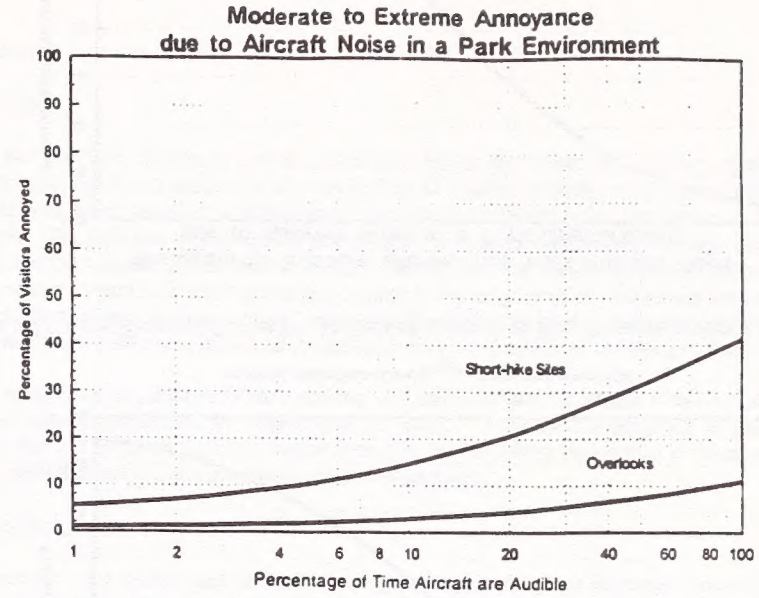


Figure 6.10 Dose-Response Curves for Estimating Impacts at Sites Preserving Visitor Enjoyment

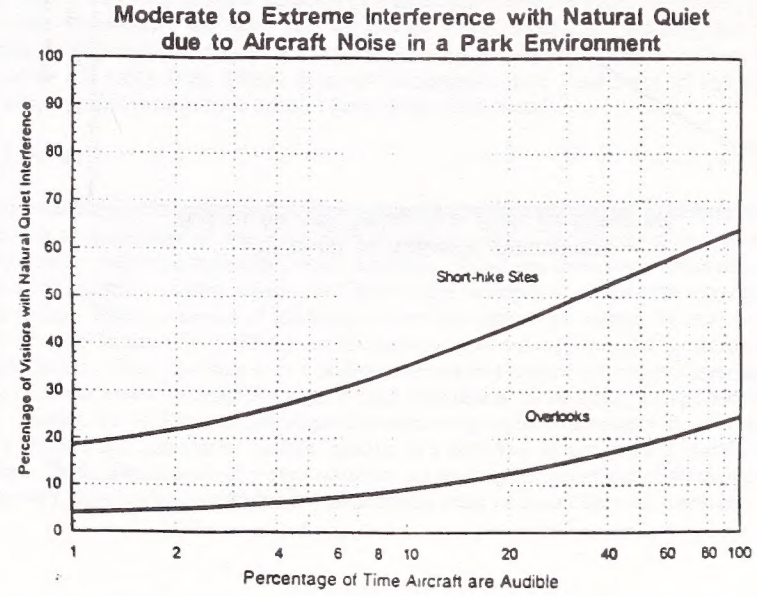


Figure 6.11 Dose-Response Curves for Estimating Impacts at Sites Preserving Natural Quiet

Figure 6.10 is to be used for sites where preservation of natural quiet is not one of the primary concerns, while Figure 6.11 provides curves to be used for sites where preservation of natural quiet is very important.

Park personnel would collect time audible data, using a carefully designed sampling procedure, and compare the results to the appropriate curve to estimate the degree of impact. The NPS would set criteria for acceptable degrees of impact, identifying both maximum acceptable percentages and maximum acceptable numbers of visitors impacted for each type of site or activity. If these maximums are exceeded, the NPS would initiate a process of analysis and interaction with aircraft operators and other agencies (eg., the FAA, DOD, etc.) to eliminate or reduce the impacts.

The criteria for maximum acceptable impact would be developed by the NPS in terms of both percent of visitors to a site and numbers of visitors to a site. In terms of percent of visitors, a maximum acceptable value might be between 20 and 30 percent. Then, for example, where park measurements show a dose that results in more than 25 percent of visitors impacted, analysis and mitigation efforts would commence. Maximum acceptable numbers of visitors impacted would also be identified.

6.4.2 Analysis and Mitigation

A flexible approach to analysis and mitigation will be developed and pursued. In some cases, for example, discussions with aircraft operators may identify simple changes (for example re-routings of air tours) that can be tested, found to provide acceptable reductions of impact, and implemented. In other cases, detailed analyses of many alternatives may be necessary. In such cases, the simple time audible metric can no longer be used. This metric, as mentioned, is extremely difficult to predict, and the alternative dose-response curves using hourly equivalent sound level, $L_{eq,1hr}$, of audible aircraft will be employed.

Detailed analyses of aircraft produced sound levels have long been conducted for airports and military air facilities. These efforts have resulted in computer models that can predict, generally within acceptable tolerances, how sound levels on the ground will be altered by changes in airspace use. These models are being adapted or expanded to provide predictive capabilities for aircraft overflights of parks (Reddingius 1994). Using these computer models and information about airspace use including aircraft types, number of flights per day, location of flight corridors, altitudes of flights and terrain features, $L_{eq,1hr}$, can be computed for current operations and predicted for future or proposed operations, and Figures 6.12 or 6.13 can be used to estimate resulting visitor impacts.

As discussed above, ideally the curve used would be the one derived from the dose-response site most similar to the site in question. However, since current understanding of all of the factors that distinguish one dose-response site from another is limited, the curves of Figures 6.12 and 6.13 are conservatively (in a protective sense) derived from the results for the study area that consistently had the highest level of visitor response for a given level of aircraft sound, Sliding Sands at Haleakala National Park. The curves for Sliding Sands are higher than those for Wahaula Temple, Point Imperial, and Lipan Point. The curves for Sliding Sands are slightly lower than those for Hermit Basin, but the Sliding Sands curves were chosen over those for Hermit Basin due to the larger sample size and greater range of $L_{eq,1hr}$ measured at Sliding Sands, see Table 6.7 and Figure 6.9.

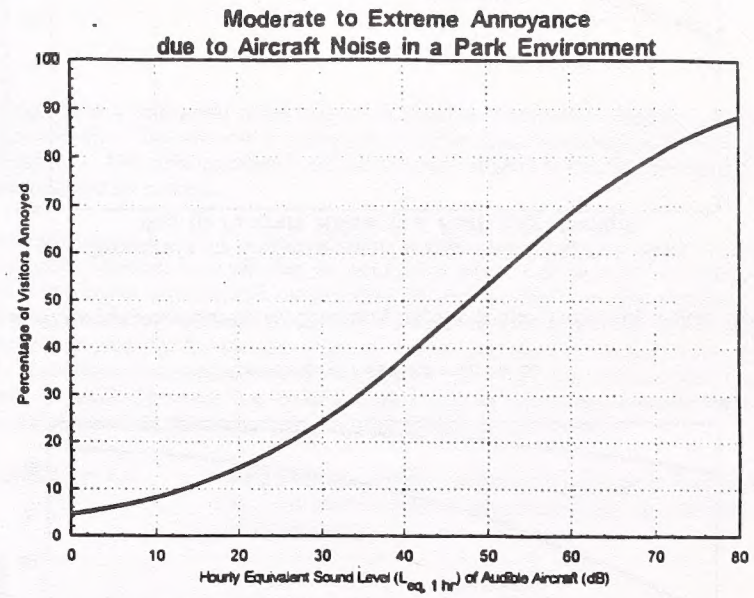


Figure 6.12 Dose-Response Curves for Analysis of Airspace at Sites Preserving Visitor Enjoyment

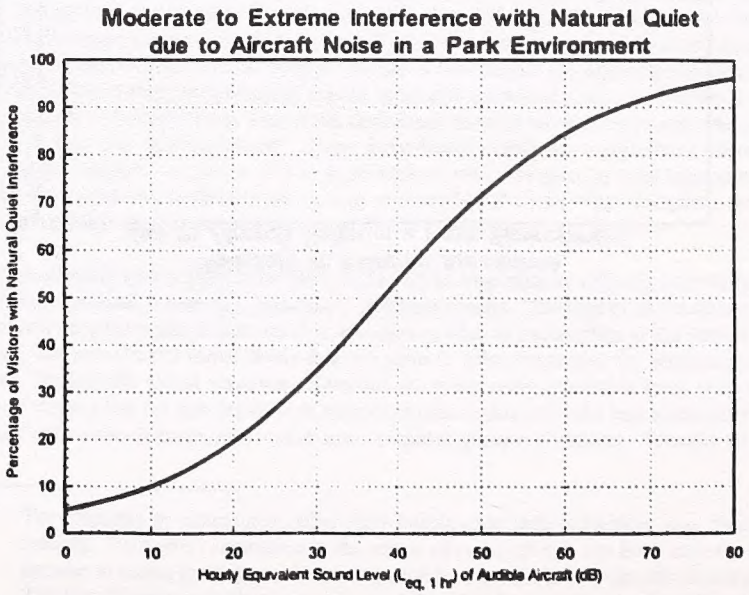


Figure 6.13 Dose-Response Curves for Analysis of Airspace at Sites Preserving Natural Quiet

Using the computer models, working with aircraft operators and appropriate other government agencies, NPS would quantify alternatives and identify effective, feasible changes that reduce visitor impacts to acceptable levels.

6.4.3 Limitations

There are some limitations to this approach to identification, analysis and mitigation, and these limitations derive from the limited data upon which the dose-response curves are based. NPS will recognize the following limitations in use of these curves.

1. The curves are based on visits to specific areas, not visits to entire parks. The study's data were collected on visitor reactions and sound levels in specific areas, and therefore should be applied to visits to specific areas only and not extended to an entire park visit. Many sites within a park may be individually considered, but there is no simple way to extend the results to overall visitor reactions that result at the end of a stay in a park.

2. The curves are based on visits of relatively short duration. All study areas were located where visitors were in the area for periods of 2 hours or less. The results have not been tested for visits of much longer duration, such as daylong or overnight stays, though sites with longer visit durations of up to four to five hours can probably be analyzed accurately.

3. The curves apply to audible aircraft sounds only. The dose-response curves, in terms of $L_{eq,1hr}$, are for use where aircraft are audible. Predictions of aircraft sound levels may not accurately account for all aspects of aircraft sound generation and propagation, so care must be used in developing estimates of $L_{eq,1hr}$ that take audibility into account. For example, moving aircraft flight corridors may result in some types of aircraft, or some portions of aircraft flight, becoming inaudible at a specific site. This reduction in audibility must be incorporated into $L_{eq,1hr}$ if Figure 6.12 or 6.13 is to provide accurate estimates of impact.

4. The curves are based on scenic parks. The parks in which the data were collected all attract visitors for their scenic, natural qualities. At the selected study areas, visitors were hiking or sight-seeing outdoors. The background environments at these areas were primarily natural, although human noises and parking lot noises were present at the overlooks. The results can probably be used for other scenic natural parks with similar conditions, and for visitors participating in similar activities, but their applicability to sites with indoor activities or to strictly cultural or historic parks, or parks in urban or suburban areas has not been verified.

5. The curves are based on tour aircraft in level flight. Primarily light propeller and helicopter tour aircraft in level flight were observed during data collection. The results may be applied to similar conditions, but their applicability to jet aircraft, very large aircraft, or to areas where aircraft are noticeably climbing or descending has not been tested.

6.5 Summary

System-Wide

For the National Park System as a whole, about one-fifth of the visitors (88 million) report hearing or seeing aircraft, and 2 to 3 percent of all visitors (7 to 12 million visitors) report having their enjoyment interfered with, being annoyed or having their appreciation of natural quiet interfered with by the sound of aircraft. The NPS has a problem. It is not systemic with problems in every park. The number of parks and visitors impacted is limited. Rather, it is the case that serious problems are occurring in a limited number of parks scattered across the country in which pockets of visitors are impacted. It is a serious problem in search of a measured solution. The NPS considers it akin to the proverbial canary in the mine; finding solutions should not be delayed while the duration of the canary's song is measured.

Yet the complexity of park overflight problems does not lend itself to simple solutions such as setting minimum altitude restrictions for flights over all parks. A systematic approach is needed, but an approach that will focus on the most serious problems and have them understood in terms of impacts on visitors, individual parks, and specific locations within parks.

Individual Parks

Visitor impacts vary widely park to park. Low percentages of visitors impacted, however, cannot be taken to mean that there are no locations within a park where significant impacts occur. NPS management rankings show a modest, but recognizable correlation with visitor impacts.

The conclusion is that very different numbers of visitors report impacts from overflights, park to park, and that park management has been able to provide a reasonable rank ordering that shows some correspondence with these variations. Hence, out of a total of about 340 park units, there may actually be about 50 to 100 parks (6 PL 100-91 units, 49 Management Rank 1 units and 45 Management Rank 2 units) with overflight problems in need of investigation and remedy.

Specific Sites

All system-wide and park specific conclusions about impact on visitor enjoyment are based only on visitor responses with no knowledge of visitor exposure to aircraft sound. The site specific dose-response data provide both visitor response and aircraft sound exposure. These data show that visitors who are exposed to the sound of aircraft do report impacts, and that reports of impact increase with increasing exposure to aircraft sound. Further, reports of impact are dependent upon many factors that may or may not be related to the specific site. Such differences in response by sound exposure and by location have three major implications. First, lowering sound exposure will reduce impacts on visitors, meaning that some reduction of sound levels is beneficial even if total elimination of intruding aircraft sound cannot be achieved. Second, the NPS can set guidelines for minimizing impacts on visitors by selecting maximum acceptable percents and numbers of visitors impacted at a specific park site or for a specific recreational opportunity. Third, some areas and visitor activities are more important to isolate from overflights than others, meaning that moving overflights to less sensitive areas of a park may be warranted.

United States Department of Agriculture | Forest Service | Pike and San Isabel National Forests Comanche and Cimarron National Grasslands | 1920 Valley Dr. Pueblo, CO 81008-1797 (719) 545-8737

Reply to: 1950

Date: June 3, 1996

Air National Guard Readiness Center
Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Ave.
Andrews Air Force Base, MD 20762-5157

Dear Sir or Madam,

I have reviewed the Draft Environmental Impact Statement for the Colorado Airspace Initiative and have the following comments to make.

During scoping, the Pike and San Isabel National Forests and Comanche and Cimarron National Grasslands (PSICC) provided you with information regarding issues of concern. For the most part, those issues focused on the effects noise might have on recreation and wildlife. These concerns were based on the fact that portions of the airspace are over National Forest and National Grassland under my jurisdiction. Airspace components of particular interest include certain MOA's (Airburst, La Veta, Pinon Canyon, and Two Buttes) and routes (VR-413, IR-409, and XVR-1427).

The DEIS addresses these issues. Following a review of research, site-specific studies, and standards, the document predicts no adverse impact on either recreation or wildlife.

I note in particular that the preferred alternative stipulates 2,000 feet AGL for overflights in designated Wilderness (DEIS Appendix L). This is consistent with Forest Service policy. As disclosed in the DEIS this standard will be adhered to whenever possible, which means that considerations such as safety, weather, etc. could occasionally cause overflights to be lower than 2,000 feet AGL.

PSICC's offices have been contacted by the public in the past related to overflights, especially in Wilderness, and I can anticipate such to continue because the overflight areas are popular for recreation. To provide me with factual information regarding overflights of lands under my jurisdiction, I would appreciate receiving data from you on the actual number of overflights, location, distance above ground level, etc., in whatever form you are allowed to provide it. I recognize that security matters may limit the amount of detail you can provide. Even in summarized form, however, the information will help compare actual activity levels with those predicted in the EIS. -1

Activities on National Forests are closely linked to rural economies, and the -2

RESPONSES TO COMMENTS

Response to Comment No.1

Cumulative sortie data for the area in question may be found in Volume II, Appendix N.

The ANG policy on wilderness overflights is to ensure that all flights be at 2,000 feet above designated Federal wilderness areas. Recognizing that safety factors could occur (i.e., low cloud cover), the exception was added. There is no past documentation available on how many times this type of occurrence has happened.

Response to Comment No.2

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Forest Service has always strived to gear its programs toward local economic needs whenever possible. In our case, with rural economies being strongly influenced by tourism, any impact that overflights might have to detract from recreational experiences on National Forest could make an important difference in some of the towns lying nearby. In that respect I note that the DEIS has considered this matter and provided information on it.

Finally, the discussion of cumulative impacts appears to include not only activities associated with the Air National Guard's programs, but also those of other military programs as well. As such, the numbers of sorties predicted in Appendix N represent maximum figures. If it proved to be possible for you to provide data on overflights as requested above, then it would be possible to monitor the cumulative predictions made in the EIS.

Sincerely,

Rick D. Cables

RICK D. CABLES
Forest Supervisor

STATE OF COLORADO
Roy Romer, Governor
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WILDLIFE
AN EQUAL OPPORTUNITY EMPLOYER

John W. Mumma, Director
6060 Broadway
Denver, Colorado 80216
Telephone: (303) 297-1192

REFER TO

For Wildlife –
For People

6-12-96

Bruce Goforth
Sr. Wildlife Biologist
Colorado Division of Wildlife
2126 N. Weber
Colorado Springs, CO 80907

Air National Guard Readiness Center
Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews Air Force Base, MD 29762-5157

52

Dear Sir:

Colorado Division of Wildlife (CDOW) personnel have reviewed the Draft Environmental Impact Statement for the Colorado Airspace Initiative (CAI) and the following comments represent CDOW concerns and suggestions for document refinement.

LACK OF MEANINGFUL ALTERNATIVES ANALYSIS

This document does not provide a comparison (analysis/discussion) of alternatives (with the exception of listing sortie numbers and noting route changes) to indicate relative levels of impacts to wildlife by alternative. Specific to wildlife and wildlife recreationists on State Wildlife Areas (SWAs) and other public lands, CDOW's detailed scoping comments dated 9-14-93 were not analyzed or responded to individually or collectively to answer concerns or to show comparative impacts of alternatives. 1 2

LACK OF DISCUSSION/ANALYSIS REGARDING CDOW MITIGATION METHODOLOGY

CDOW has recommended a well thought out, biologically credible, functional (flight training compatibility), and administratively feasible set of wildlife impact avoidance measures. These impact avoidance measures are specific to the F-16's flight and noise dynamics, i.e. 1.5 NM lateral avoidance of noise sensitive areas to avoid startle effects on wildlife and recreationists. ANG did not discuss the validity and functionality of these measures. For instance, ANG might have compared CDOW's selection of species and Noise Sensitive Areas (NSAs) for avoidance to the methodology developed by Oak Ridge National Laboratory staff, Roger Kroodsma and Warren Webb in cooperation with the U.S. Air Force (see Table 14) and commented accordingly. 3

DEPARTMENT OF NATURAL RESOURCES, James S. Lochhead, Executive Director
WILDLIFE COMMISSION, Arnold Salazar, Chairman • Rebecca L. Frank, Vice Chair • Mark LeValley, Secretary
Louis F. Swift, Member • Jesse Langston Boyd, Jr., Member
William R. Hegberg, Member • John Stulp, Member • James R. Long, Member

RESPONSES TO COMMENTS

Response to Comment No.1

A detailed comparison of the alternatives is given in Subsection 2.6.2 and accompanying tables.

Response to Comment No.2

All comments received during the scoping process associated with this EIS were considered in the preparation of the document. Such comments, as they relate to the proposal, have helped to improve the EIS process and have become a part of the administrative record for the proposal.

Response to Comment No.3

The ANG feels that mitigation measures should be based upon scientifically supportable evidence whenever it is available. Some studies have shown 500 meters to be a valid standoff distance and thus the ANG has proposed a 1500 feet AGL vertical separation. The ANG is not aware of any studies that support a 1.5 NM "bubble" around nest sites. These vertical limits of 1500 feet AGL have been supported by the USFWS in other parts of the country as well.

Response to Comment No.4

Individual species of concern have been identified in Section 3 for each airspace and impacts addressed in Subsection 4.6. Cumulative impacts are accounted for in the analysis because the noise levels used for the analysis represent cumulative airspace use totals (see Appendix N).

LACK OF ANALYSIS FROM AN INDIVIDUAL SPECIE OR CUMULATIVE IMPACT PERSPECTIVE

Not only is there a lack of analysis for individual species of concern, for Noise Sensitive Areas (NSAs), State Wildlife Areas (SWAs) or other public lands, the Draft EIS fails to address cumulative impacts to wildlife and to wildlife recreationists. A cumulative analysis of military flight operations should be provided to show how COANG training impacts, those of Air Combat Command (ACC), flights by other ANG units, flights originating from Peterson AFB, etc. combine to create potentially significant impacts to wildlife and wildlife recreationists on an additive and/or synergistic basis, i.e impacts to lesser prairie chicken (Colorado State threatened specie) by combined COANG and ACC flights during the mating season. Nor is there any analysis as to how impacts of this sort, for all the species of concern and NSAs, add to a level of significance when looked at collectively. -4

INAPPROPRIATE USE OF NOISE ANALYSIS METHODOLOGY TO REFLECT IMPACTS

ANG uses the guidelines established by the Federal Interagency Committee on Noise (FICON) to address noise impacts on wildlife and wildlife recreationists. The FICON methodology is a composite noise metric developed for analyzing noise impacts within an urban airport environment and for addressing EPA standards for human auditory and behavioral responses/impairments. This methodology averages day/night noise levels over a 24 hour period (Ldn) and measures for potential impacts against a 65 dB background or compatibility guideline. This methodology is inappropriate for application in natural environments where ambient noise levels are in the 30 to 40 dB category and where quiet is key to wildlife survival and social dynamics, and to experiential expectations of wildlife recreationists. Further, there is no discussion of whether a single event, sudden on-set response to severe noise in low dB ambient environments, i.e. "startle effect" is significant and/or a better measure of impact to wildlife than composite noise metric applications. This is an important omission since CDOW noise avoidance recommendations are based on eliminating startle effect impacts. -5

HUMAN/WILDLIFE SAFETY NOT ADEQUATELY ANALYZED TO MINIMIZE IMPACTS

Safety issues surrounding bird strike potential are not adequately discussed for bird species or for pilot and aircraft safety. For instance, there is no discussion of how CAI might best eliminate bird strikes, i.e. use of CDOW recommendations for 1.5 NM lateral avoidance of water bodies where there are concentrations of raptors and waterfowl, versus CAI flight floors of 300, 500, and 1,500 ft. AGL over these waterbodies. -6

RESPONSES TO COMMENTS

Response to Comment No.5

The approach used in the EIS has been modified. The Federal Interagency Committee on Noise (FICON), representing a variety of Federal agencies with a mix of concerns associated with aircraft noise, reviewed aircraft noise analyses issues in 1992. This committee's report (FICON 1992) continued an approach to evaluating relative impacts associated with aircraft noise that has been recognized by noise analysis experts as the most widely endorsed and comprehensive approach to aircraft noise analysis available. This approach to noise analysis was incorporated into the analyses associated with the Draft EIS. In general, Federal land use compatibility criteria are derivatives of guidelines first devised for land near airports. All land use compatibility is based on the use of Day-Night Average Sound Level (abbreviated as DNL or Ldn) as the descriptor representing community noise environments. The criteria treat areas below DNL 65 dB as compatible for all uses, including residential, and they treat DNL 65 dB as a threshold for significant exposure. There is no generally accepted method for treating rural areas differently for these purposes.

However, many EIS reviewers, including some members of the Federal regulatory community, felt the application of the FICON standards, and the 65 dB threshold, to a rural setting was inappropriate for such areas with more quiet ambient noise conditions. Consequently, the use of the 65 dB threshold as the sole means to assess relative impacts or the acceptability of noise levels associated with aircraft operations addressed in the EIS has been modified and the analysis now includes additional information to evaluate potential impacts.

Response to Comment No.6

Because of the potential for loss of a pilot's life and the high cost of modern military aircraft, avoidance of collisions with birds is extremely important to the ANG. The potential for a bird-aircraft strike would not change significantly under the proposal. Both the Original Proposal Alternative and the Preferred Alternative consist largely of modifications to existing airspace or establishments of new airspace in the vicinity of existing airspace. These actions would, therefore, encompass the same seasonally adjusted bird avoidance procedures associated with the bird migration corridors as are utilized currently with the existing airspace. Due to the fact that only four bird strikes have occurred in existing airspace associated with the Colorado Airspace Initiative in the past five years, the likelihood of future bird-aircraft strikes under any of the alternatives would be expected to be low.

The USAF has established a Bird/Aircraft Strike Hazard (BASH) Team to implement procedures to prevent and reduce the threat of bird/aircraft strikes, and to investigate and track any bird strikes that occur. In addition, each USAF/ANG base or flying unit is required to establish a BASH program to minimize the risk of bird strikes both at the base airfield and in airspace training routes for the unit. The USAF BASH Team assists each base or flying unit by providing Bird Avoidance Model (BAM) graphs. These graphs estimate the relative bird strike risk for flying along a specific low-level route or operations area. The model is developed on the basis of waterfowl and raptor migration and concentration data. The BAM graph depicts the severity of the bird strike hazard at a particular time of day, month, and segment of a low-level route. This information is used by the flying unit to determine the optimum route schedule and avoidance measures to be taken to prevent bird/aircraft strikes. In addition, the unit publishes Notices to Airmen (NOTAM) to alert transient aircrews to specific bird migration hazards, activity periods, and avoidance procedures.

CDOW's inclusion of a USAF graphic, representing bird strikes worldwide between 1987-89, shows that 5,345 bird strikes of 8,000 strikes total (67 %) occurred from ground zero to 500 ft. Eightyeight per cent (approximately 7,000 of 8,000) of all bird strikes occurred at elevations between zero and 2,000 ft. Overflights of major waterbodies/waterfowl concentration areas, i.e. San Luis Lakes, by 500 to 1,500 ft. AGL are, therefore, ill-advised. However, 1.5 NM lateral avoidance of such areas would virtually eliminate bird strikes.

ANG points to the figures of one or zero recorded bird strikes in the past five to ten years for various CAI flight routes. But, this information does not adequately address the safety issue because there is no discussion of reducing the risk of bird strikes. Further, ANG does not mention the loss of a SAC bomber and the death of three of six crew members to a collision with a white pelican on a flight route adjacent to CAI routes near La Junta, CO in 1984 (DeFusco 1988). DeFusco (USAF) specifically notes this accident in his article entitled "Modeling Bird Hazards to Aircraft: A GIS Application Study". DeFusco states in this article "....Bird collisions with aircraft pose a serious threat to flight safety worldwide. These incidents cost many millions of dollars in damages and all too frequently end the lives of aircrews and their passengers..." He goes on to state..."Military aircraft are particularly vulnerable to bird strikes as they routinely operate at lower altitudes and higher speeds than commercial aircraft."

FAILURE OF ANG TO ABIDE BY AIRBURST RANGE EA FLIGHT AVOIDANCE MEASURES--POTENTIAL IMPACTS NOT ANALYZED

CDOW flight avoidance measures (1.5 NM lateral and seasonal) are not being uniformly observed for CAI flights accessing the Airburst Range on Ft. Carson as agreed in the Airburst Range Environmental Assessment document. These measures were to be incorporated in the Flight Operations Manual by the 140th so various users of IR 409 and Airburst Range would avoid impacting nesting peregrine falcons or other species of concern. Without such publishing, users briefed outside Colorado's 140th are not automatically advised of these measures. The welfare of several wildlife species of concern, especially the peregrine falcon, is compromised by this failure to comply. Additionally, the peregrine falcon study was possibly compromised by violations of avoidance measures for nesting peregrine falcons. These potential impacts were not discussed in the Draft EIS. 7

FAILURE TO ADEQUATELY DISCUSS POTENTIAL ECONOMIC IMPACTS RELATED TO DIMINISHED WILDLIFE RECREATION

CDOW is self funded through the sale of hunting and fishing licenses. The effect of noise impacts to wildlife recreationists, from an economic perspective, is not provided. 8

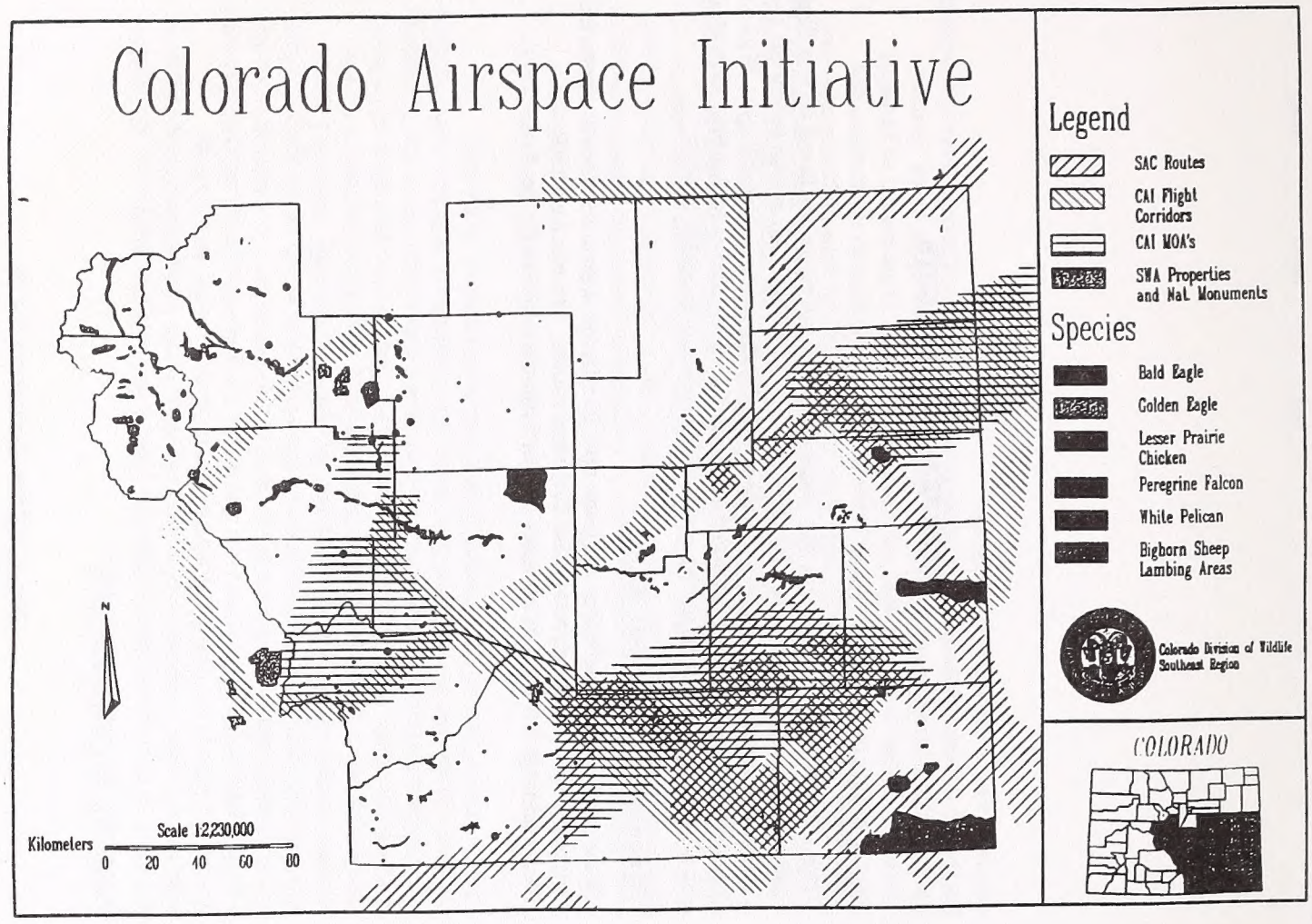
RESPONSES TO COMMENTS

Response to Comment No.7

The COANG has been flying the avoidance measures as outlined in the Flight Information Publication (FLIP) (AP/1B) for the MTRs. All pilots flying on these MTRs are aware of these restrictions and fly the routes accordingly. Pilots of the 140 WG are briefed on specific areas to avoid, and information provided by CDOW is displayed in the operations room at Buckley ANGB.

Response to Comment No.8

Data to measure the effect of noise specifically on wildlife recreationists, from an economic perspective for the CAI study area, are not available. Determining the impact ot each recreationist would be subjective.


Colorado Airspace Initiative
Legend
SAC Routes
CAI Flight Corridors
CAI MOA's
SWA Properties and Nat. Monuments
Species
Bald Eagle
Golden Eagle
Lesser Prairie Chicken
Peregrine Falcon
White Pelican
Bighorn Sheep Lambing Areas
Colorado Division of Wildlife Southeast Region
COLORADO
N
Kilometers
Scale 1:2,230,000
0 20 40 60 80

Hunters and fishers typically use public lands, many of which are wilderness areas or SWAs where wilderness qualities, i.e. no road traffic, is experienced. In a study by USFWS Cooperative Research Unit at Stillwater, Oklahoma (Jan. 1979) the following conclusions were reached: (1) If overflights increase, recreational experience will be diminished, (2) Persons seeking a close encounter with nature are more bothered by the aircraft than casual visitors, and (3) Widespread latent support exists for banning aircraft overflights altogether. That backcountry users are usually more sensitive to and have more adverse reactions to noise disturbance is similarly documented in the Report on Effects of Aircraft Overflights on the National Park System-Executive Summary Report to Congress (July, 1995). 9 10

The implications of monetary impacts to CDOW and to communities which benefit from hunting and fishing recreation should have been examined in the Draft EIS. Recent economic studies in Colorado show hunting and fishing related expenditures total approximately two billion dollars annually. What will CAI's impact be to individual communities and to Colorado's economy regarding diminished hunting and fishing recreation? 11

FAILURE TO INCLUDE ALL TRAINING FLIGHT AREAS WITHIN COLORADO

Cougar MOA is not addressed in the CAI Draft EIS. The 140th uses this MOA as do other ANG training units. This area and its use should be analyzed along with the other MOA's and MTRs in Colorado. 12

BIOLOGICAL CONSEQUENCES CHAPTER OF THE DRAFT EIS IS FLAWED

Overview

The biological chapter of the CAI Draft EIS is very misleading. Much of the information provided is incomplete and/or incorrect. Literature that supports findings of insignificant impacts to wildlife, or which is inconclusive as to impacts, is emphasized. Admittedly, the body of literature discussing noise related impacts on reproduction and population dynamics is scant. Therefore, impacts on reproduction and populations are mostly unknown. However, the conclusion drawn by ANG, with this lack of information, is that these impacts are nonexistent or insignificant. CDOW does not agree. Lack of information does not equate to no impact. CDOW feels that this section should be rewritten to reflect a more objective discussion of the literature. Further, CDOW feels that in the absence of conclusive information to determine significant impacts to wildlife that CDOW impact avoidance recommendations, based on best professional judgement, be followed. 13, 14

RESPONSES TO COMMENTS

Response to Comment No.9

Under the Preferred Alternative, the maximum number of sorties for the Colorado Airspace Initiative would decrease from 5,441 sorties to 4,909 sorties per year.

Response to Comment No.10

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.11

The presentation of socioeconomic resources, in particular employment and the local economy, was presented in the EIS based on available data that were collected in 1993 and 1994. Standard industry earnings and tourism data for the study area were provided by the U.S. Department of Commerce, an agency that was able to provide consistent data for all counties and states within the CAI study area for the entire time period.

During the public scoping process, comments regarding the CAI identified peace, solitude, and natural quiet as an issue of concern. A new subsection addressing natural quiet has been added for the Final EIS (see Subsection 4.14). The availability of more recent economic studies regarding hunting and fishing expenditures could be incorporated into the EIS. However, since the Preferred Alternative would reduce sorties from 5,441 to 4,909, these changes would not be expected to adversely impact the current levels of recreational opportunities.

Response to Comment No.12

Cougar MOA is not part of the Colorado Airspace Initiative.

5

Process

ANG mentions the formation of an informal committee by representatives of the ANG, USFWS, U.S. Army-Ft. Carson, Bureau of Land Management, USFS, Colorado College and CDOW to discuss and resolve issues associated with Colorado Airspace Initiative and its potential to affect wildlife, especially endangered species. This committee was formed specifically to develop and implement a peregrine falcon study to determine potential impacts to peregrines from the use of the Airburst Range. Impacts to wildlife throughout CAI have never been addressed during these meetings. CDOW would welcome such a dialogue.

ANG states in the Draft EIS that avoidance measures will be decided through discussions with state and federal wildlife agencies. CDOW has continually submitted its avoidance measure recommendations as part of the Citizen's Advisory Committee meetings, but ANG has deferred reaching any agreements until after the Draft EIS process. CDOW suggests that this dialogue be resumed with a goal of finalizing an agreement prior to issuance of the Final EIS.

Finally, aside from discussing biological arguments pro and con, ANG has not supplied any compelling information or reasons as to why it will not accommodate CDOW avoidance measures. This point is of great significance in light of the fact that CDOW flight avoidance measures have been implemented (intermittently) with benefits to wildlife. This has been accomplished without detriment to flight training capability.

CDOW comments on the following are directed to the Wildlife segment of the Biological Consequences chapter, 4.6.1.3.2, pp. 4-124-26.

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Large herbivores

ANG states in this section that "...few studies have related herbivore responses to biologically important changes, such as changes in reproductive success or habitat use...", and concludes that ..."while it is possible to predict behavioral responses, it is unknown whether large herbivores are adversely affected by overflights (Lamp 1989; USDA 1992).

CDOW agrees that few studies have been conducted to reach beyond initial behavioral and physiological responses, i.e. bighorn sheep disturbed by overflights are interrupted in feeding and/or leave the immediate area, with the conclusion that food intake for the sheep was being affected (Stockwell et al. 1991). The next phase of these studies would require loss of weight analysis, and/or reproduction and population monitoring over extended periods to reflect on reproduction and survival impacts. This level of research needs to be done and assumes that other significant variables affecting the results can be controlled.

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RESPONSES TO COMMENTS

Response to Comment No.13

The Air National Guard is committed to protect natural resources according to sound professional recommendations based upon scientific evidence. The ANG also has recently committed to continuing communication with the USFWS on natural resource issues, primarily those involving threatened and endangered species and other wildlife.

The ANG is funding and will continue to fund studies on T&E species in the interest of obtaining scientific evidence on potential impacts associated with military activities for the CAI and other similar actions.

The ANG, in cooperation with the USFS, has conducted low-altitude flights over Mexican Spotted Owl nests. Results of this effort have been incorporated into the Final EIS.

Response to Comment No.14

Comment noted. Additional information has been added to Section 4.6 in Volume I of the Final EIS. The addition of this information led to the conclusion that while the noise generated from low-altitude military overflights may be initially startling, habituation to jet aircraft noise occurs with most wildlife species. Species-specific responses to low-altitude overflights vary considerably, and responses from individual animals may have the potential to cause injury. However, wildlife populations are usually affected only when a variety of stressors work in combination to impact the, including declines or fluctuations in the availability of a food source, habitat destruction or alteration, predation, hunting, trapping, poaching, disease, or inclement weather, rather than noise alone. Normally, it would be unrealistic to predict or attribute any wildlife population declines to a single stressor, such as noise. In addition, no published scientific evidence was identified that indicated harm may occur to wildlife as a result of exposure to the levels of noise generated by military aircraft that would utilize the airspace associated with the Colorado Airspace Initiative.

In the absence of such studies for large herbivores, one must rely on studies where the initial impacts observed can be extrapolated to conclude reproduction and population level impacts. One such study (Harrington and Veitch 1992) examined the impact of low altitude, jet overflights on caribou. Those caribou exposed to jet overflights lost more calves than unexposed caribou. 16

CDOW has repeatedly experienced population level problems with bighorn sheep which have been disturbed on a continual basis. The affected sheep herds have exhibited stress responses, a predisposition to poor health, followed by die offs from disease, i.e. lung worm/viral pneumonia complex. Noise disturbances which contribute to this problem should be avoided.

With this information (literature and experience) CDOW has recommended that certain bighorn sheep, elk, and antelope birthing areas be avoided by 1.5 NM lateral distance during birthing seasons. Finally, accounts of large herbivores having been seriously injured resulting from panic responses to low-level, jet aircraft overflights have been observed, i.e. a staff ecologist at Cabeza Prieta National Wildlife Refuge witnessed a deer run off a 25 ft. cliff causing a broken limb (CPNWR Report, 1993). CDOW feels these impacts are significant and should be avoided. 17

Waterfowl

Low level airflight impacts to waterfowl with potential for reproductive and population level effects have been better documented. Ward and Stehn (1989), Belanger and Bedard (1990), and Davis and Wiseley (1974) show that waterfowl changed their activity extensively enough due to repeated exposure to overflights that energy losses could extrapolated. Further, panic responses by colony nesting birds to noise disturbance have been shown to result in egg loss (Bunnell et al. 1981; Hunt 1985). 18

Bunnell et al. (1981) indicated serious impact to reproductive success in white pelicans due to low-flying aircraft where 88% of the eggs on the rookery were crushed following a single overflight-panic incident shortly after egg laying. White pelicans are present at numerous Colorado reservoirs which are being overflown by COANG and other military units using CAI routes. CDOW feels these reservoirs should be avoided by 1.5 NM (laterally) to avoid noise impacts to pelicans, to recreationists, and to avoid pelican/aircraft collisions. 19

At the end of the waterfowl comments within the wildlife section, ANG cites (Gladwin, 1988) following the statement, "Studies measuring change in habitat use and energetic costs have not demonstrated meaningful effects." This statement is an incorrect interpretation and/or use of Mr. Gladwin's information and views on this subject (personal communication-Gladwin May 22, 1996). 20

RESPONSES TO COMMENTS

Response to Comment No.15

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.16

The use of caribou as a comparative species to the large herbivores present in southeastern Colorado or the extrapolation of noise impact data from caribou studies is not relevant due to the far more severe stresses influencing caribou herds in their natural habitat, such as inclement weather and predation.

Response to Comment No.17

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.18

Comment noted. Information added to Subsection 4.6.1.3.2 in Volume I of the Final EIS.

Response to Comment No.19

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.20

Comment noted. Information added to Subsection 4.6.1.3.2 in Volume I of the Final EIS.

0050 Bruce Goforth

Raptors

ANG cites (Ellis, 1981; Lamp 1989) in stating that "... raptors reacted to low-altitude aircraft but that no reproductive failures resulted from the behavioral responses." ANG also states that "...Adults are very reluctant to leave the nest and generally remained away for 1 minute or less." It is typical of nesting raptors to respond to low-altitude overflights by "hunkering down" versus flushing from the nest, which is typical of waterfowl. The fact that raptors do flush, even if returning within a short time (one minute or so) does not mean that raptors are not affected. Disturbed raptors might experience significant energy losses if the disturbances occurred continuously. Andersen et al. 1986, determined that human disturbance to raptors at Pinon Canyon Military Training site in Colorado did result in raptors changing their home range. While these disturbances did not include low-level jet aircraft overflights, such flights do occur at the Pinon Canyon MOA and could cause additive affects. Although Ellis concludes that low-level flights at distances greater than 500 m appeared to have no reproductive effects on several raptor species studied, CDOW recommends 1.5 NM lateral avoidance for nesting raptors to insure a consistent approach to avoiding impacts which vary by raptor species and by individual. -21

Threatened and Endangered (T & E Species)

The T & E species referenced by ANG, bald eagle, peregrine falcon, mexican spotted owl, plains sharp-tailed grouse, greater prairie chicken, and lesser prairie chicken are all marginal in Colorado (on the edge of their range and/or small populations). CDOW feels that these species are especially in need of protecting for this reason. At present, studies are being conducted for only two of these species, the peregrine falcon and the mexican spotted owl.

Peregrines--ANG mentions the cooperative peregrine falcon study being conducted in the vicinity of the Airburst Range on FT. Carson. The information ANG provides regarding this study is meager and misleading. ANG fails to mention that the study was designed to be a three year study. The first year's efforts were to document peregrine falcon use in the area--in conjunction with CDOW's annual peregrine nesting survey. -22

Years two and three were to further examine peregrine use and nesting data, and to measure behavioral and physiological responses of falcons to the F-16 overflights. ANG ceased to provide funding after the first year for which the data showed extensive use of Ft. Carson by the falcons nesting at four nearby aeries. Reproductive success at the one aerie noted for the lack of nesting success several years prior to the implementation of CDOW avoidance measures was not mentioned. This was the only aerie being consistently overflown by COANG and other ANG units.

RESPONSES TO COMMENTS

Response to Comment No.21

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.22

The results of T&E consultations with the U.S. Fish and Wildlife Service under Section 7 of the Endangered Species Act are presented in Appendix Q of Volume II.

ANG also failed to mention data showing an unexplained absence of peregrine use associated with Teller Reservoir (a rich wetland/riparian habitat) down range and in close proximity to the Airburst Range. Such habitat is preferred by peregrines for hunting, and the adults studied were found to be accessing similar habitats (on a regular basis) many miles away. ANG withdrew from the study when questions were raised regarding the feasibility of gathering behavioral data in years two and three. Discussions with USFWS, which had opted to postpone a May Effect for COANG and the Airburst Range contingent on a peregrine falcon study, resulted in a commitment by ANG to do a Biological Assessment (as part of the CAI Draft EIS)-- in lieu of the abandoned study. ANG did not conduct a biological assessment. Finally, ANG in discussing the Airburst peregrine study, inappropriately mixes comments on the Airburst study with the Ellis (1981) study to conclude no impact to peregrines by F-16 overflights.

Mexican spotted owls--ANG is now participating in a study to determine potential impacts to mexican spotted owls on and nearby Ft. Carson. The first year of this study, similar to that of the first year peregrine study, centered on collecting distribution data. Subsequent study will focus on impacts potentially caused by human disturbance, to include F-16 overflights.

Sharp-tailed grouse, Greater prairie chicken and Lesser prairie chicken-- These are state T & E species. No studies are being conducted for these species at this time. CDOW has recommended 1.5 NM lateral avoidance of production areas during the mating season for greater and lesser prairie chickens. The remaining lesser prairie chicken populations in Colorado are very few and can be found on less than 5 % of their former habitat in Colorado. These populations continue to be threatened by new oil and gas leases and by changing land use, agricultural and otherwise. If CDOW's avoidance measures are followed, impacts will be avoided, and studies will not be necessary. Otherwise, CDOW will request that ANG conduct studies to determine whether low-level jet overflights affect populations by masking vocalizations and/or otherwise interrupting lek activities.

CDOW Credibility

CDOW would like to reiterate statements ANG has made in the CAI Draft EIS that few studies regarding impacts to wildlife, at the population level, have been conducted. In the absence of such studies, CDOW will rest its credibility in making impact avoidance recommendations based on the best available data, analytical processes and best professional judgment (see Tables 1-11 and accompanying maps). These recommendations are made consistent with our legislative mandate to protect, manage and enhance the wildlife resources in Colorado, in public trust for all her citizens and visitors.

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RESPONSES TO COMMENTS

Response to Comment No.23

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Our approach in doing this has been to find flight avoidance measures which will protect a very limited number of sensitive species, without significantly impairing military training flight operations. CDOW feels this can be accomplished by using 1.5 NM lateral avoidance of noise sensitive areas. This approach combines the use of the most up to date wildlife information, state of the art GIS (geographic information system) technology, aircraft specific noise data, and a common sense approach to flight training administration. This approach has been successfully implemented (intermittently) by two COANG airspace managers over the past four years.

Robert B. Braid (1992) of Oak Ridge National Laboratory, who does substantial work for the U.S. Military, counsels in his article, Incorporation of Public Participation in Environmental Analyses of Low-Altitude Flying Operations, that the public should be widely consulted to determine and avoid impacts. He advises the use of an evaluation framework to provide consistent criteria to "... reduce opportunities for subjectivity to enter the analytical process." CDOW has established such an evaluative framework consistent with that developed by Oak Ridge National Laboratory Staff, Roger Kroodsma and Warren Webb, in cooperation with the U.S. Air Force (see Table 14). Note that the only species for which CDOW is asking avoidance measures are endangered, threatened, candidate species, or those species considered particularly important, and sensitive to noise impacts. Further, the predicted impacts to these species fall in the Moderate to High categories. -24

ANG has yet to recognize the importance of CDOW wildlife impact recommendations or to acknowledge the validity of evaluative processes to reach collaborative solutions. Braid (1992) states that "...Airspace realignment to avoid sensitive environmental resources--essentially the development of an alternative airspace configuration --generally is the most effective mitigative action." CDOW invites ANG to enter sincere discussions for this purpose prior to issuing the Final CAI EIS.

SUMMARY

CDOW has significant concerns about the inadequacies of this document as follows: -25

Lack of Meaningful Alternatives Analysis
Lack of Discussion/Analysis of CDOW Mitigation Methodology
Lack of Analysis From an Individual Specie or Cumulative Impact Perspective
Inappropriate use of Noise Analysis Methodology to Reflect Impacts
Human/Wildlife Safety Not Adequately Analyzed
Failure of ANG to Abide by Airburst Range EA Flight Avoidance Measures--Potential Impacts to Wildlife not Analyzed

RESPONSES TO COMMENTS

Response to Comment No.24

The ANG has been and will continue to work with the U.S. Fish and Wildlife Service, the Colorado Department of Natural Resources, the Bureau of Land Management, and other regulatory agencies to study the effects of their actions on threatened and endangered species within the areas affected by its operations. Representatives from these organizations meet periodically in a Coordination Group to discuss and study species of concern. Some ongoing study activities are currently funded by the ANG, including a study with the U.S. Forest Service on the Mexican Spotted Owl. The ANG will continue this cooperative effort and adjust its operations should any of these studies identify potential impacts on any threatened or endangered species.

Response to Comment No.25

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Failure to Adequately Discuss Potential Economic Impacts Related to Diminished Wildlife Recreation
Failure to Include All Flight Training Areas Used by COANG
Failure to Provide Complete and Accurate Wildlife Information in Reaching a Conclusion of No Significant Impact

CDOW recommends that the Draft CAI EIS be rewritten to address these issues in a substantive and meaningful way. CDOW personnel are available to answer any questions you might have regarding these comments, and I appreciate the opportunity to provide them. Please give me a call at 719-473-2945, ext. 224 if I can be of further assistance.

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Sincerely,

Bruce Goforth
Sr. Wildlife Biologist

cc. D. Mc Auliffe, DNR
J. Mumma
B. Mc Closkey
W. Graul
S. Norris
B. Towry
R. Desilet
K. Moser

TABLE 1

COLORADO AIRSPACE INITIATIVE
CDOW NOISE SENSITIVE SPECIES/NOISE SENSITIVE AREAS: IR-409

LOCATION	NOISE SENSITIVE SPECIES & NOISE SENSITIVE AREAS	PROPOSED AVOIDANCE MEASURE
Point A to B	Arkansas River Crossing Waterfowl: Production Area Winter Concentration Area Bald Eagle: Winter Range	Overfly Arkansas River at a minimum 2,500' AGL
Point C	Two Buttes State Wildlife Area Bald Eagle: Winter Range Winter Concentration Area Roost Site Golden Eagle: Nest Sites(2) White Pelican: Summer Concentration Area	Fly Right of Centerline
Points D to E	Bighorn Sheep: Lambing Areas(2) Golden Eagle: Nest Site	Fly at or Right of Centerline
Points E to F	Golden Eagle: Nest Sites(2) Bighorn Sheep: Lambing Areas(2)	Avoid by 1.5 NM
Points F to G	Apishapa State Wildlife Area Bighorn Sheep: Lambing Areas(2) Golden Eagle: Nest Site	Fly at or Right of Centerline from Point F to Point H.
Point G	Golden Eagle: Nest Sites(2)	
Points H to I	Pueblo State Wildlife Area Bald Eagle: Winter Range Winter Concentration Area Roost Site Osprey: Nest Site Great Blue Heron: Breeding Colony White Pelican: Summer Concentration Area Waterfowl: Winter Concentration Area Production Area	Fly Left of Centerline and minimum 2,500' AGL over the Arkansas River.

TABLE 2

COLORADO AIRSPACE INITIATIVE
CDOW NOISE SENSITIVE SPECIES/NOISE SENSITIVE AREAS: VR-413

LOCATION	NOISE SENSITIVE SPECIES & NOISE SENSITIVE AREAS	PROPOSED AVOIDANCE MEASURE
Point A	Peregrine Falcon: Nesting Area Potential Nesting Habitat	Avoid by 1.5NM or fly Left of Centerline.
Point B	Elevenmile State Recreation Area Elevenmile Canyon Recreation Area Bald Eagle: Winter Range Winter Concentration Area White Pelican: Summer Concentration Area Peregrine Falcon: Potential Nesting Habitat	Fly at or Left of Centerline
Point E	San Luis Lakes State Wildlife Area/State Park	Fly at or Left of Centerline
Point F	Bighorn Sheep: Lambing Area	Fly at or Left of Centerline
Points I to J	Pueblo State Wildlife Area Bald Eagle: Winter Range Winter Concentration Area Roost Site Osprey: Nest Site Great Blue Heron: Breeding Colony White Pelican: Summer Concentration Area Waterfowl: Winter Concentration Area Production Area	Fly Left of Centerline and minimum 2,500' AGL over the Arkansas River.

TABLE 3

COLORADO AIRSPACE INITIATIVE
CDOW NOISE SENSITIVE SPECIES/NOISE SENSITIVE AREAS: IR-414

LOCATION	NOISE SENSITIVE SPECIES & NOISE SENSITIVE AREAS	PROPOSED AVOIDANCE MEASURE
Point A	White Pelican: Summer Concentration Area Waterfowl: Production Area Winter Concentration Area Bald Eagle: Winter Range	Fly Left of Centerline.

TABLE 4

COLORADO AIRSPACE INITIATIVE
CDOW NOISE SENSITIVE SPECIES/NOISE SENSITIVE AREAS: XIR-424

LOCATION	NOISE SENSITIVE SPECIES & NOISE SENSITIVE AREAS	PROPOSED AVOIDANCE MEASURE
Points A to B	Lesser Prairie Chicken: Production Areas(Leks) Critical Habitat	Avoid by 1.5NM.
Point D	White Pelican: Summer Concentration Area Waterfowl: Winter Concentration Area Production Area Bald Eagle: Winter Range	Fly Right of Centerline
Points D to F	Golden Eagle: Nest Sites(2)	Fly at or Right of Centerline
Points F to G	Pueblo State Wildlife Area Bald Eagle: Winter Range Winter Concentration Area Roost Site Osprey: Nest Site Great Blue Heron: Breeding Colony White Pelican: Summer Concentration Area Waterfowl: Winter Concentration Area Production Area	Fly Left of Centerline and minimum 2,500' AGL over the Arkansas River.

TABLE 5

COLORADO AIRSPACE INITIATIVE
CDOW NOISE SENSITIVE SPECIES/NOISE SENSITIVE AREAS: IR-415

LOCATION	NOISE SENSITIVE SPECIES & NOISE SENSITIVE AREAS	PROPOSED AVOIDANCE MEASURE
Point D	White Pelican: Summer Concentration Area Waterfowl: Winter Concentration Area Production Area Bald Eagle: Winter Range	Fly Right of Centerline
Points D to F	Golden Eagle: Nest Sites(2)	Fly at or Right of Centerline
Points F to G	Pueblo State Wildlife Area Bald Eagle: Winter Range Winter Concentration Area Roost Site Osprey: Nest Site Great Blue Heron: Breeding Colony White Pelican: Summer Concentration Area Waterfowl: Winter Concentration Area Production Area	Fly Left of Centerline and minimum 2,500' AGL over the Arkansas River.

TABLE 6

COLORADO AIRSPACE INITIATIVE
CDOW NOISE SENSITIVE SPECIES/NOISE SENSITIVE AREAS: XVR-1427

LOCATION	NOISE SENSITIVE SPECIES & NOISE SENSITIVE AREAS	PROPOSED AVOIDANCE MEASURE
Points C to D	Lesser Prairie Chicken: Production Areas (Leks) Critical Habitat	Fly Left of Centerline
Points E to F	Golden Eagle: Nest Sites(2) Bighorn Sheep: Lambing Areas(2)	Fly at Centerline
Points F to G	Apishapa State Wildlife Area Bighorn Sheep: Lambing Areas(2) Golden Eagle: Nest Site	Stay at or Right of Centerline from Point F to Point H.
Points G to H	Golden Eagle: Nest Sites(2)	
Points H to I	Pueblo State Wildlife Area Bald Eagle: Winter Range Winter Concentration Area Roost Site Osprey: Nest Site Great Blue Heron: Breeding Colony White Pelican: Summer Concentration Area Waterfowl: Winter Concentration Area Production Area	Fly Left of Centerline and minimum 2,500' AGL over th Arkansas River.

TABLE 7
COLORADO AIRSPACE INITIATIVE
NOISE SENSITIVE SPECIES/NOISE SENSITIVE AREAS: CHEYENNE LOW MOA

NOISE SENSITIVE SPECIES & NOISE SENSITIVE AREAS		PROPOSED AVOIDANCE MEASURE
Lesser Prairie Chicken:	Production Areas (Leks) Critical Habitat	Avoid by 1.5NM

TABLE 8
COLORADO AIRSPACE INITIATIVE
NOISE SENSITIVE SPECIES/NOISE SENSITIVE AREAS: TWO BUTTES LOW MOA

NOISE SENSITIVE SPECIES & NOISE SENSITIVE AREAS		PROPOSED AVOIDANCE MEASURE
Two Buttes State Wildlife Area:		
Golden Eagle:	Nest Site	
Bald Eagle:	Winter Range	
	Winter Concentration Area	
	Roost Site	
White Pelican:	Summer Concentration Area	
Waterfowl:	Production Area	
	Winter Concentration Area	Avoid by 1.5NM

TABLE 9
COLORADO AIRSPACE INITIATIVE
NOISE SENSITIVE SPECIES/NOISE SENSITIVE AREAS: PINON MOA

NOISE SENSITIVE SPECIES & NOISE SENSITIVE AREAS		PROPOSED AVOIDANCE MEASURE
Golden Eagle:	Nest Sites(4)	
Bighorn Sheep:	Lambing Areas(2)	Avoid by 1.5NM

TABLE 10
COLORADO AIRSPACE INITIATIVE
NOISE SENSITIVE SPECIES/NOISE SENSITIVE AREAS: LA VETA MOA

NOISE SENSITIVE SPECIES & NOISE SENSITIVE AREAS		PROPOSED AVOIDANCE MEASURE
Peregrine Falcon:	Nesting Areas(3)	
Golden Eagle:	Nest Sites(9)	
Bighorn Sheep:	Lambing Areas(2)	Avoid by 1.5NM

TABLE 11
COLORADO AIRSPACE INITIATIVE
NOISE SENSITIVE SPECIES/NOISE SENSITIVE AREAS: AIRBURST "A" MOA

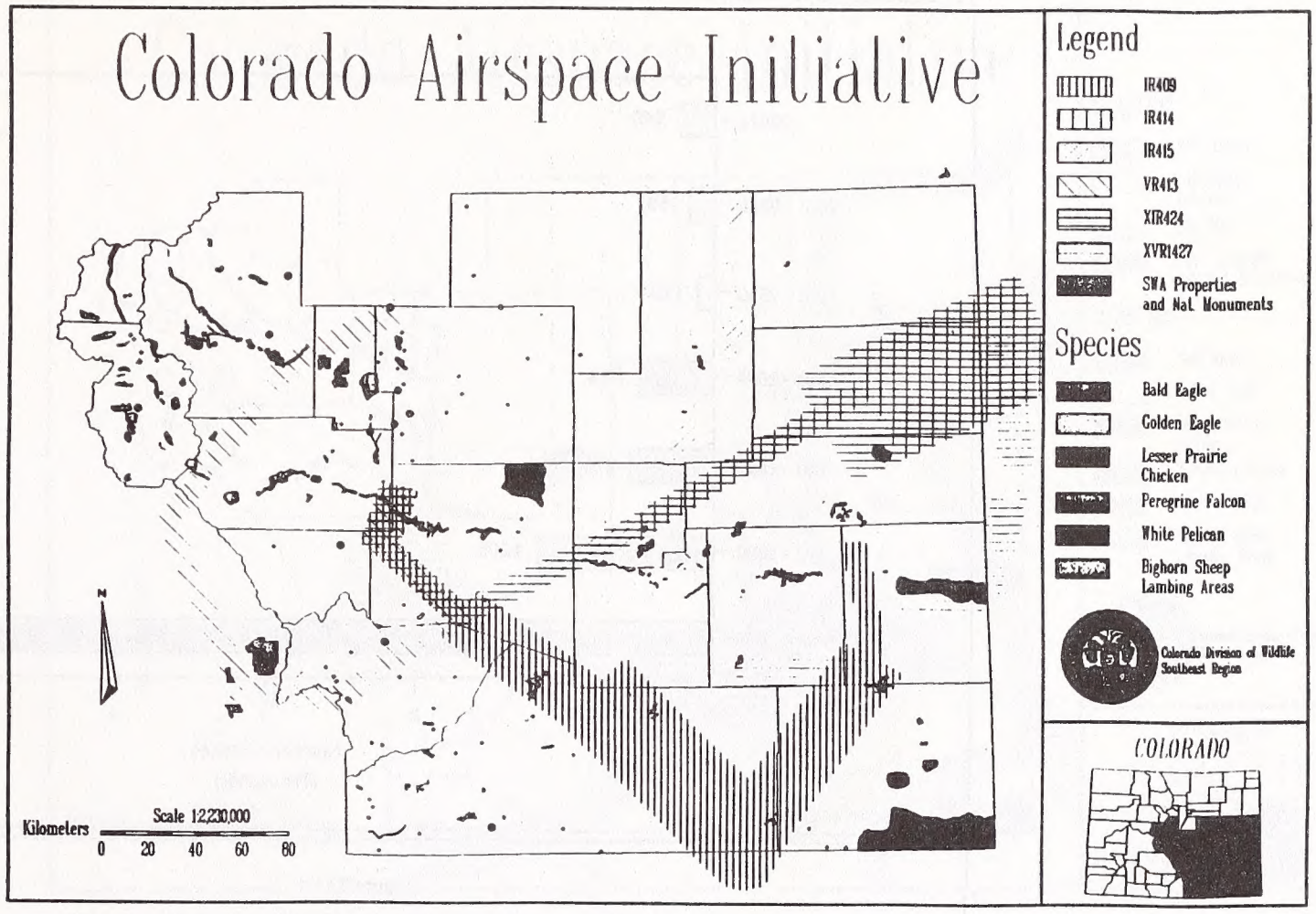
NOISE SENSITIVE SPECIES & NOISE SENSITIVE AREAS		PROPOSED AVOIDANCE MEASURE
Beaver Creek State Wildlife Area		
Peregrine Falcon:	Nesting Areas(2)	
Golden Eagle:	Nest Site	
Bald Eagle:	Winter Range	
	Winter Concentration Area	Avoid by 1.5NM

TABLE 12
COLORADO AIRSPACE INITIATIVE
NOISE SENSITIVE SPECIES/NOISE SENSITIVE AREAS: AIRBURST "B" MOA

NOISE SENSITIVE SPECIES & NOISE SENSITIVE AREAS		PROPOSED AVOIDANCE MEASURE
Golden Eagle:	Nest Site	Avoid by 1.5NM

TABLE 13
COLORADO AIRSPACE INITIATIVE
NOISE SENSITIVE SPECIES/NOISE SENSITIVE AREAS: AIRBURST "C" MOA

NOISE SENSITIVE SPECIES & NOISE SENSITIVE AREAS		PROPOSED AVOIDANCE MEASURE
Pueblo State Wildlife Area		
Bald Eagle:	Winter Range	
	Winter Concentration Area	
	Roost Site	
Osprey:	Nest Site	
White Pelican:	Summer Concentration Area	
Waterfowl:	Production Area	Avoid by 1.5NM or stay west of IR-409 centerline Points H to I. Also, maintain minimum 2,500' AGL over Arkansas River.
	Winter Concentration Area	
Great Blue Heron:	Production Area(Rookery)	


Colorado Airspace Initialive
Legend
IR409
IR414
IR415
VR413
XIR424
XVR1427
SWA Properties and Nat. Monuments
Species
Bald Eagle
Golden Eagle
Lesser Prairie Chicken
Peregrine Falcon
White Pelican
Bighorn Sheep Lambing Areas
Colorado Division of Wildlife Southeast Region
COLORADO
N
Kilometers
Scale 1:2,230,000
0 20 40 60 80

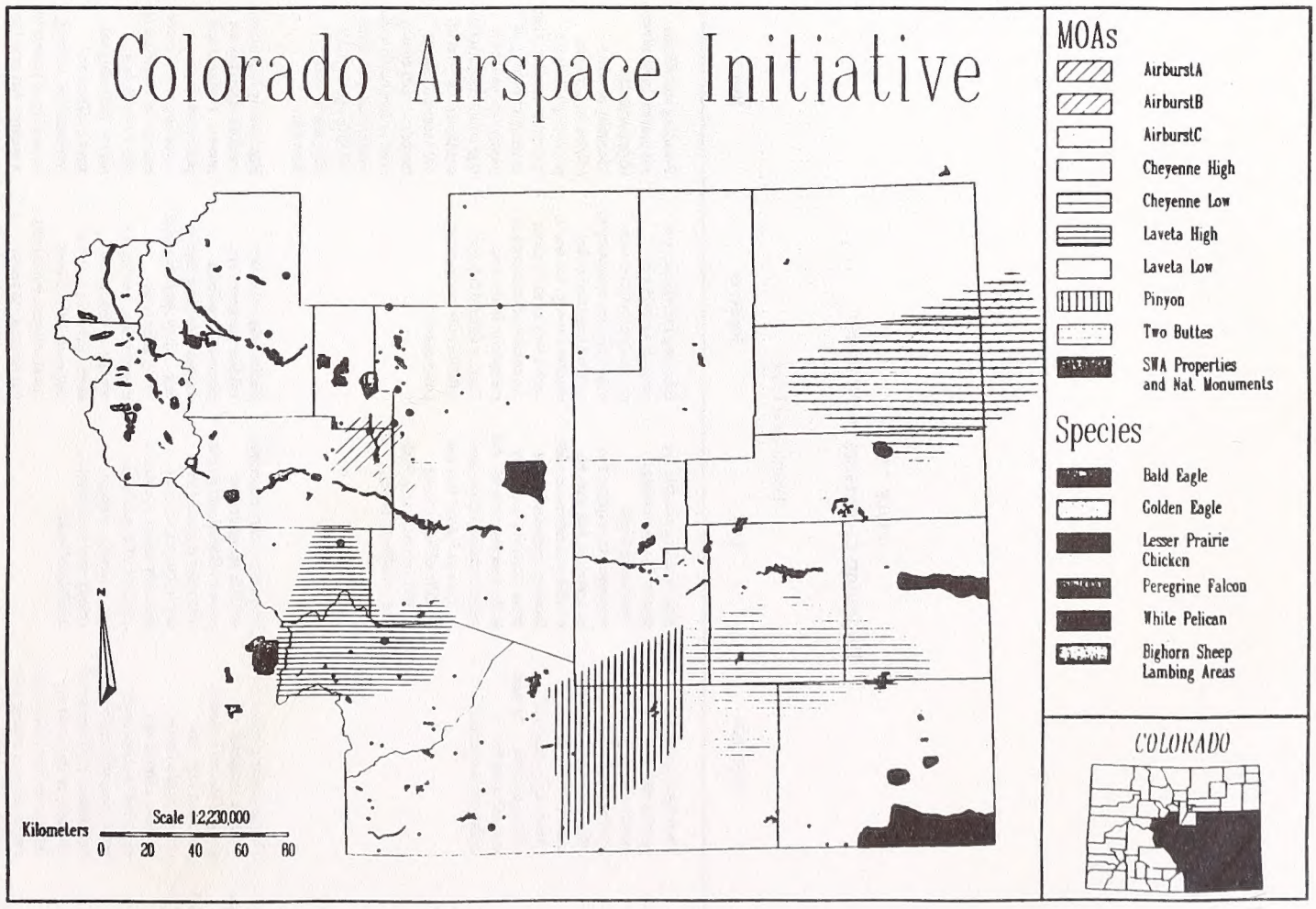

Colorado Airspace Initiative
MOAs
AirburstA
AirburstB
AirburstC
Cheyenne High
Cheyenne Low
Laveta High
Laveta Low
Pinyon
Two Buttes
SWA Properties and Nat. Monuments
Species
Bald Eagle
Golden Eagle
Lesser Prairie Chicken
Peregrine Falcon
White Pelican
Bighorn Sheep Lambing Areas
COLORADO
N
Kilometers
Scale 1:2,230,000
0 20 40 60 80

TABLE 14

Definition of Impacts for Wildlife*

Impact Type	Definition of Impact			
	Negligible	Low	Moderate	High
Endangered, threatened, proposed, or candidate species.	No subject species is present and no impact is expected (e.g., animals not present and no other effects are observable by state wildlife officials). [Note: expectation of habituation not acceptable as a criterion for endangered species.]	Non-breeding animals are present in low numbers. Occasional fright responses are expected to be observed, but with no resulting interference with feeding, reproduction, or other activities necessary to the species survival. No serious concern expressed by state or federal fish and wildlife officials (state wildlife agency, U.S. Fish and Wildlife Service).	Breeding individuals are present. Occasional mortality or interference with activities necessary to survival expected to be observed rarely, but not in such a way as to threaten the continued existence of the species in the area. State or federal fish and wildlife officials express some concern.	Breeding individuals are present in relatively high numbers. Mortality or other effects (e.g., injury, physiological stress, effects on reproduction, nesting, or rearing of young) are expected that could threaten the continued survival of the species, causing major concern among state or federal fish and wildlife officials (state wildlife agency, U.S. Fish and Wildlife Service).
Other wildlife (Note: particular species (e.g., caribou) or groups of species (e.g., waterfowl may be designated in specific route analyses].	No particularly important wildlife resources are present and an impact is expected (e.g., no susceptible animals present, animals not expected to show fright responses, animals become habituated, high minimum altitude) or impact is so infrequent that it does not cause concern among state or federal wildlife officials (state wildlife agency, U.S. Fish and Wildlife Service).	No particularly important wildlife resources are present. Occasional fright responses expected to occur, but not so as to seriously affect population numbers of a species or cause serious concern among state or federal wildlife officials.	Particularly important wildlife resources are present. Occasional mortality or other effects (e.g., injury, physiological stress, effects on reproduction, nesting, or rearing of young) are expected to occur (such that route adjustments could mitigate the effect), but not so as to cause major changes in animal numbers or habitat use; specific concerns are expressed by state or federal wildlife officials.	Particularly important wildlife resources are present. Frequent and persistent cases, involving one or more species, of mortality or other effects (e.g., injury, physiological stress, effects on reproduction, nesting, or rearing of young) in a manner that may lead to decreases in population levels; specific, serious concerns expressed by state or federal wildlife officials (State Wildlife Agency, U.S. Fish and Wildlife Service).

*Matrix developed by ORNL staff members, Roger Kroodsma and Warren Webb, in cooperation with the U.S. Air Force.

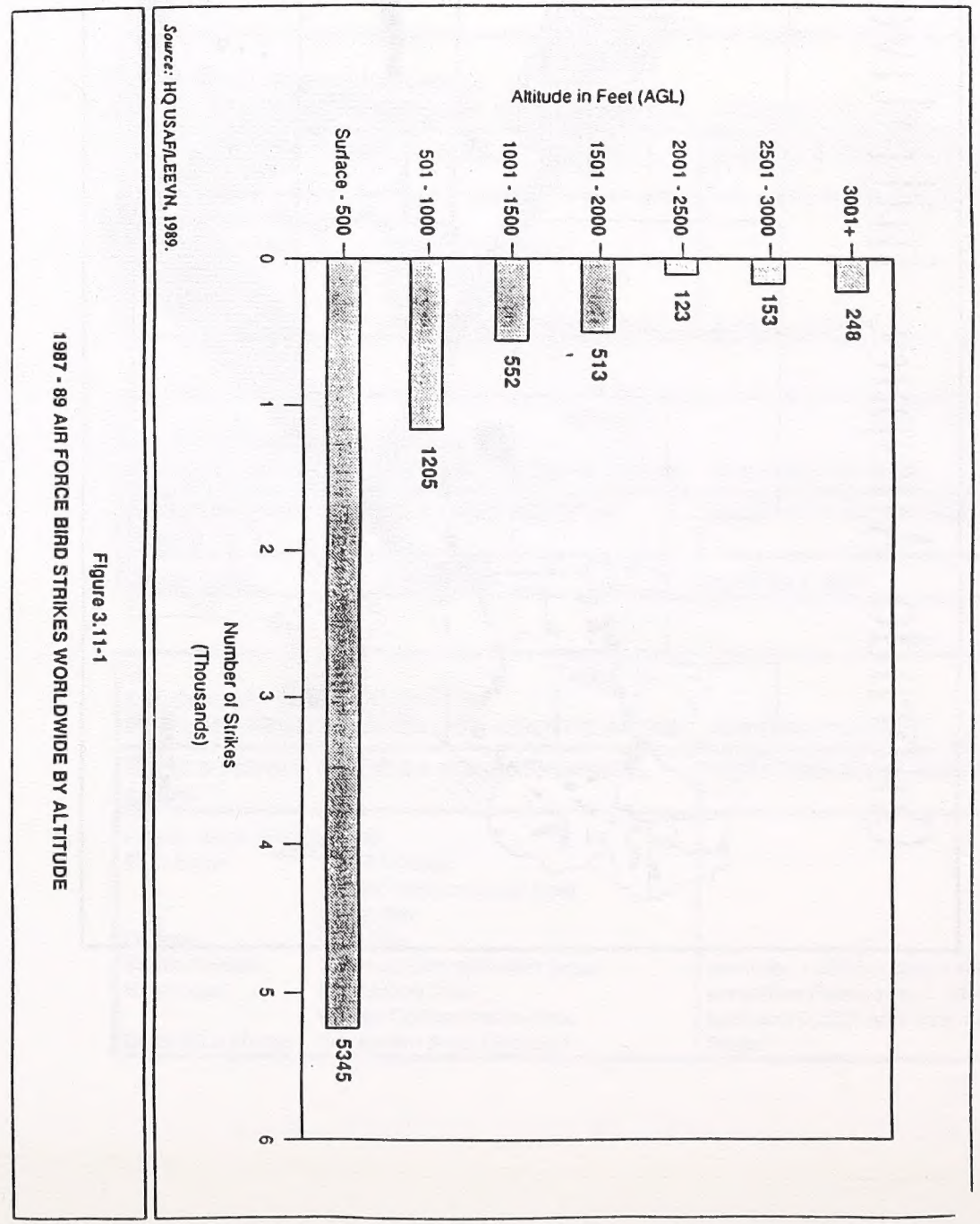
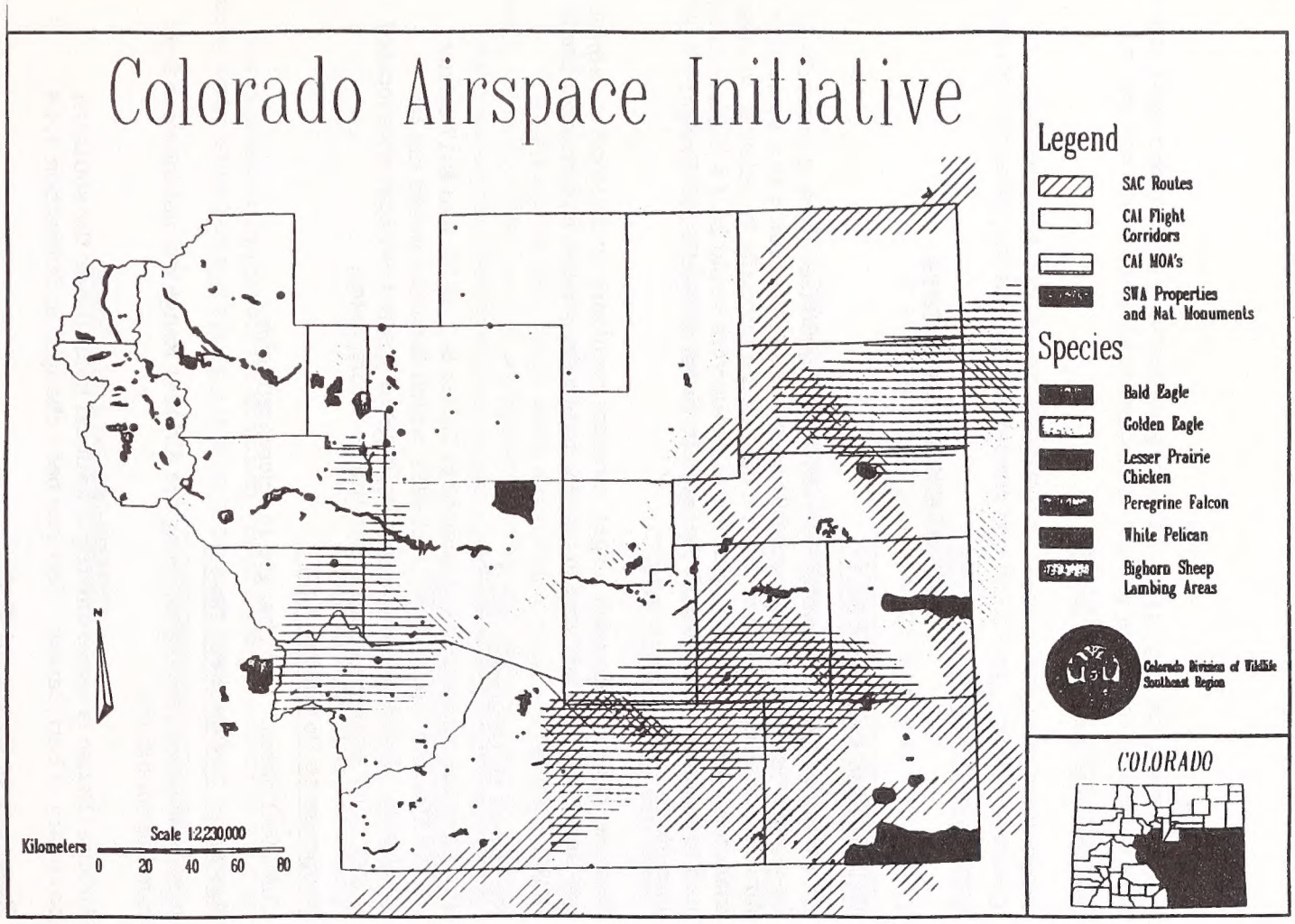


Figure 3.11-1
1987 - 89 AIR FORCE BIRD STRIKES WORLDWIDE BY ALTITUDE


Colorado Airspace Initiative
Legend
SAC Routes
CAI Flight Corridors
CAI MOA's
SWA Properties and Nat. Monuments
Species
Bald Eagle
Golden Eagle
Lesser Prairie Chicken
Peregrine Falcon
White Pelican
Bighorn Sheep Lambing Areas
Colorado Division of Wildlife Southeast Region
COLORADO
N
Kilometers
Scale 1:2,230,000
0 20 40 60 80

DEPARTMENT OF THE ARMY

HEADQUARTERS, FORT CARSON
FORT CARSON, COLORADO 80913-5000

REPLY TO ATTENTION OF
AFZC-ECM

24 Jun 96

MEMORANDUM FOR Air National Guard Readiness Center, Program Manager, CAI EIS, ATTN: ANGRC/CEVP 3500 Fetchet Avenue, Andrews Air Force Base, MD 20762-5157

SUBJECT: Comments on the Draft Environmental Impact Statement (DEIS) for the Colorado Airspace Initiative (CAI)

1. The Directorate of Environmental Compliance and Management (DECAM) has reviewed the subject DEIS and has the following comments:

a. Page xi, Executive Summary. Give examples of when situations might not warrant adherence to 2,000 feet AGL. How often do these situations typically occur? -1

b. Page xxiv - xxxv, Executive Summary. In Tables S-6, S-7 S-10, S-11 and S-14 the Evaluation Factor for Threatened and Endangered Species states "No adverse impacts expected for Mexican spotted owl. Tables S-9, S-13 and S-17 state "All Mexican spotted owl sites and peregrine falcon nest sites would not be overflown. No adverse impacts expected." All tables concerning Mexican spotted owls should have the same wording as Table S-17 until the current research is complete. -2

c. Page xxv, Table S-7. Box at the intersection of Evaluation Factor "Noise" row and Preferred Alternative column. The last line in the box should read "events above 65 dB in Airburst C." -3

d. Page 1-13, Paragraph 1.4.4. Why is the Airburst Range not part of the CAI? This paragraph states that tactical use of the Range is unchanged but what about the rate of usage? The EIS needs to state that the number of sorties utilizing the range will remain the same per the "Environmental Assessment of the Effects of the Conversion of the 140th Fighter Wing Along IR-409 and at the Airburst Range, Colorado" or state if the usage will increase or decrease. Impacts from change in the usage rate should be documented in the EIS. State the distance the Airburst Range is within Fort Carson boundaries. "Well inside" the boundary is a qualitative term subject to interpretation. -4

e. Page 2-45, Section 2.4, second paragraph, first point "Maintain certain minimum altitudes ..." Specify what the minimum altitude is. -5

RESPONSES TO COMMENTS

Response to Comment No.1

An example of safety parameters to fly below 2,000 feet above ground could be cloud cover that may occur while an aircraft is on a route to a particular airspace. Seeing the cloud cover, a pilot would normally fly below it, in most instances. An example of operational parameters would be if a flight member had to reposition the aircraft to maintain visual contact while flying in formation.

Because of mountain peak height, airspace boundary or cloud cover, lateral avoidance will be instituted to avoid federally designated wilderness areas in lieu of overflight.

Response to Comment No.2

The airspace components presented in Tables S-9, S-13, and S-17 do not overlie Mexican spotted owl nest sites, which therefore would not be overflown. Avoidance measures for Mexican spotted owl nest sites located under other airspace components will be incorporated.

Response to Comment No.3

Comment noted. Text changed in referenced table.

Response to Comment No.4

It is anticipated that flights using the Airburst Range will not increase from existing conditions.

Airburst Range is approximately 2 nautical miles inside the southern boundary of Fort Carson. Text has been changed in Subsection 1.4.4.

Response to Comment No.5

Currently, minimum altitudes flown over known threatened and endangered species nest sites is 1,500 feet above ground level.

AFZC-ECM
SUBJECT: Comments on the Draft Environmental Impact Statement (DEIS) for the Colorado Airspace Initiative (CAI)

f. Page 2-46, Table 2-4. Show separate sortie totals for Airburst A, B and C MOAs. 6

g. Page 3-70, Table 3-40. The Turkey Creek Canyon Rock Art District is located on Fort Carson in Pueblo County not Fremont County. 7

h. Page 2-51, Military Training Routes. Include the maximum cumulative noise level for IR-409 from points G to the end since this section overlaps with routes IR-415, XIR-424, VR-413 and XVR-1427. Include a separate maximum cumulative noise level for points F to G of IR 409 since only one other route (XVR-1427) overlaps this segment of IR-409. 8

i. Page 3-31, Section 3.3.1 "One private airport, Wine Glass International..." Wine Glass International may be closed permanently. 9

j. Page 3-31, Section 3.3.2.1, third paragraph. "This site, which covers 257,236 acres..." acreage is incorrect. The correct acreage is 235,896. Change "Pinon Canyon Maneuver Area" to "Pinon Canyon Maneuver Site" throughout this paragraph and the EIS. Change second sentence of this paragraph to read "The Pinon Canyon Maneuver Site is managed by the Fort Carson Military Reservation ...". 10

k. Page 3-37, Section 3.3.6.2, third paragraph "Mating season for desert bighorn..." PCMS has Rocky Mountain bighorns not desert bighorns. 11

l. Page 3-39, Tables 3-17 and 3-18 "Threatened and Endangered Species That Have Been Documented..." and "Threatened and Endangered Candidate Species Have Been Documented..." The reference for these tables, USDOI 1993c, states that these species COULD occur not that they have been documented. Change the titles of these tables. 12

m. Page 7-1, Section 7, References. Reference ANGRC 1992a is incorrect. This version of the Environmental Assessment is not the final document. The final version is dated February 1993. The February 1993 version should be utilized for reference purposes as the 1992 version contained errors that had not been corrected. Use of the 1992 document as a reference does not correctly document the impacts of the F-16 use along IR-409 and does not include agreements that were made with the U.S. Fish and Wildlife Service and the Colorado Division of Wildlife. 13

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RESPONSES TO COMMENTS

Response to Comment No.6

Flights or sorties using Airburst A, B, and C MOAs will use all three sections in their anticipated flight pattern, therefore, a breakout by segment is not appropriate.

Response to Comment No.7

Comment noted. Notation changed in Table 3-40.

Response to Comment No.8

Noise exposure information in the EIS shows maximum cumulative noise levels. In the Final EIS this is presented in the form of noise contours. These noise contours are used to depict the noise levels associated with each segment. Also see Appendix N for cumulative sortie information used as the basis for noise modeling.

Response to Comment No.9

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.10

Comment noted. Text changed in Subsection 3.3.2.1

Response to Comment No.11

Comment noted. Text changes in Subsection 3.3.6.2.

Response to Comment No.12

Comment noted. Threatened and endangered species and candidate species tables titles have been changed accordingly throughout the Final EIS.

Response to Comment No.13

The 1993 final version of the Environmental Assessment was used for the preparation of the EIS. The reference identification has been corrected in the Final EIS.

AFZC-ECM
SUBJECT: Comments on the Draft Environmental Impact Statement (DEIS) for the Colorado Airspace Initiative (CAI)

n. PCMS MOA sorties increasing by 33% from 41 to 62. Probably no negative effect on wildlife. Will this affect Army training? 14

o. Airburst MOA sorties increasing by 13% from 2536 to 2885. Probably no negative effect on wildlife. (Mountain plovers may be a listed species by the time the EIS becomes final.) 15

XVR-1427 as a dashed line is missing from the following figures: Figure 2-19 (Page 2-30), Figure 2-20 (Page 2-31), Figure 2-21 (Page 2-33), Figure 4-4 (Page 4-8), Figure 4-5 (Page 4-10), Figure 4-7 (Page 4-13), Figure 4-8 (Page 4-14), Figure 4-9 (Page 4-16), Figure 4-10 (Page 4-18), Figure 4-11 (Page 4-19). 16

p. The Pinon Canyon Maneuver Site is incorrectly identified as the Fort Carson Military Reservation in the following figures: Figure 4-22 (Page 4-40), Figure 4-30 (Page 4-55), and Figure 4-34 (Figure 4-63). Correct any other occurrences of this error in the DEIS. 17

q. All tables documenting number of sorties should include the unit of time for the number of sorties.

r. The format for Section 3, Affected Environment, and Section 4, Environmental Consequences, should be the same in order to increase "user friendliness" of the EIS. Section 3 is organized by airspace component and Section 4 by Environmental resource. The format of these sections should mirror each other in order for the reader to make comparisons between the sections. 18

s. Fort Carson is indicated on maps and text throughout the EIS as the "Fort Carson Complex", "Fort Carson Army Reservation" or "Fort Carson Military Reservation". Correct maps and text (i.e. page 1-13, Section 1.4.4) throughout the EIS to "Fort Carson Military Reservation" so that identification of Fort Carson is consistent for the entire EIS. 19

t. The DEIS needs to include a section on Environmental Justice per the "Strategy on Environmental Justice", Department of Defense, March 24, 1995. 20

u. The DEIS is difficult to read due to the way the document is organized. Maps of the routes are difficult to read due to the large amount of information contained in each one. Color coding training routes would help especially where routes overlap. One route, XVR-1427, is missing from many of the maps. 21

RESPONSES TO COMMENTS

Response to Comment No.14

In discussions with the U.S. Army, the increase of 21 sorties per year will not affect their training or use of Pinon Canyon MOA.

Response to Comment No.15

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.16

This omission was done on purpose to make the maps easier to understand. XVR-1427 has its own set of figures that do show co-existing airspaces, including those identified in the figures referenced in the comment.

Response to Comment No.17

Comment noted. Maps labels changed where noted.

Response to Comment No.18

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.19

Comment noted. Text and map changes made for Final EIS.

Response to Comment No.20

A discussion on environmental justice has been added to the Final EIS. This new discussion may be found in Subsection 4.19. The concept of environmental justice addresses the issue of determining if actions of Federal agencies disproportionally impact the human health and environmental conditions in minority communities and low-income communities. The majority of the airspace associated with the alternatives addressed in the EIS has been in existence for many years and the changes being proposed would not significantly alter the current configuration. Environmental justice issues would be more relevant for new airspace, which occurs primarily in the southeastern portion of the State of Colorado. This new airspace does not affect any single minority group and overlies a wide variety of socioeconomic conditions.

Response to Comment No.21

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

AFZC-ECM
SUBJECT: Comments on the Draft Environmental Impact Statement (DEIS) for the Colorado Airspace Initiative (CAI)

v. Detailed noise contours for each of the geographic areas overflown by the ANG jets should be drawn showing the expected time average noise levels (L_{dnmr}) in 5 dB increments. These levels receive night weighting and penalty for startle factor.

w. Detailed noise contours for each of the geographic areas overflown by the ANG jets should be drawn showing the maximum noise levels (L_{max}) expected. Levels should receive night weighting and penalty for startle factor.

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2. The DEIS was also reviewed by Mr. Nelson D. Lewis, an acoustical engineer with the U.S. Army Center for Health Promotion and Preventive Medicine (USACHPPM). His comments are enclosed.

3. In general the DECAM feels that the DEIS is poorly organized, contains much redundant information and does not appropriately address the real noise impacts that will occur when aircraft over fly populated areas that are exceedingly quiet under normal conditions. Use of urban models is not appropriate. Noise contours should be drawn using a representative mix of aircraft, not just F-16's. The DEIS soft pedals many issues and does not address true impacts. Scenarios should be developed to mitigate, where possible, noise impacts on sensitive receptors.

23

4. Due to the size of the DEIS, it was impossible for the DECAM to review the entire document, however, based on the sections that were reviewed in depth, errors such as the ones noted above on maps, incorrect use of references, etc. indicate that the DEIS had not been adequately proof read prior to its release. Correction of these types of errors should not be performed by the public or agencies during the public comment period.

5. The DECAM POC is Ms. Vicki McCusker, (719) 526-4666 or DSN 691-4666.

Encl

THOMAS L. WARREN
Director, Environmental
Compliance and Management

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RESPONSES TO COMMENTS

Response to Comment No.22

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.23

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

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Enclosure - Comments on the Draft Environmental Impact Statement for the Colorado Airspace Initiative from USACHPPM

1. Excessive Verbiage: Sections 3 and 4 contain excessive verbiage, which should be reduced. Sections 3.2 to 3.15 provide the same information and verbiage for each element (i.e., MOA, IR, VR) of the CAI. Most of the information contained in these sections is already contained in section 3.1 or could be added to this section. The subsections of section 4.1 to 4.12 contain the same information and verbiage for each CAI element. These subsections can be replaced by condensing the information for each element into a single description with tables for each media (i.e., safety, noise, etc.). 24

2. Nighttime Operations: The footnote to tables 4-48 to 4.61 states "The MOA (or MTR) would not be used between 10 PM and 7 AM." However, a memorandum from the Commander Detachment 1, 140th Fighter Wing, Colorado National Guard (Memorandum, Headquarters 140th Fighter Wing, 140 WG DET 1/CC, 19 April 1996, Subject Installation Compatible Use Zone Study) states "As the Air National Guard and the Air Force move toward more night time operations, I anticipate the night time utilization of Airburst Range to increase significantly. I anticipate that approximately 5 to 10 percent of our total sorties to occur between 2200 and 0700 by the year 2000." Currently, one percent of these sorties occur during night time hours. These night time operations need to be addressed in the Draft Environmental Impact Statement. 25

3. Sortie/Flying Hour Increase: For the Fremont (Airburst) MOA paragraphs 4.1.5.1 and 4.1.5.2 show that the number of sorties will change from the no action level of 2536 to 2531 for the original proposal and 2885 for the preferred alternative. The number of flying hours will change from the no action level of 448 hours (Table 4.18) to 843 hours (Table 4-16) for the original proposal and 907 hours (Table 4-17) for the preferred alternative. Since the sortie scenarios described in appendix N do not show any increase in the amount of time spent in the Fremont (Airburst) MOA, either the number of sorties or the number of flying hours is incorrect. For the preferred alternative, a 14 percent increase in sorties does not equate to 102 percent increase in flying hours. 26

4. Noise Levels from Fly overs: The Draft Environmental Impact Statement gives the onset rate- adjusted monthly day-night average sound level (L_{dnmr}) and the average number of sound exposure levels (SEL) greater than 65 decibels, A weighted (dBA) per day. For each CAI element, the maximum sound level caused by the aircraft activity and the ambient sound level in the area should be included. So that the layreader can obtain a feeling for the loudness of the individual fly overs, the maximum sound 27

RESPONSES TO COMMENTS

Response to Comment No.24

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.25

The Colorado Airspace Initiative alternatives do not include night time operations (i.e., 10 p.m. - 7 a.m.).

Response to Comment No.26

There is no direct relationship between sorties and flying hours. A sortie may be of longer or shorter duration depending on the particular training requirements.

Response to Comment No.27

The Final EIS contains additional description of noise in each airspace, including discussions and comparisons of noise levels.

Enclosure - Comments on the Draft Environmental Impact Statement for the Colorado Airspace Initiative from USACHPPM

levels should be compared to the sound levels of common noise sources shown in Figure G-1.

5. L_{dnmr} Definition: On page 3-7, the startle effect correction for the L_{dnmr} is defined as 0-11 decibels (dB). On page G-7, this correction is defined as 0-5 dB. The difference in the definitions needs to be resolved. 28

6. SLUCM: In the key to Table G-1, delete "SLUCM Standard Land-Use Coding Manual" since the SLUCM's are not included in the table. 29

7. NRC NAS 1977: Reference (NRC NAS 1977) referred to in paragraph G.2.6, Page G-12, and in paragraph G.2.7, page G-14 is not included in the Appendix O Bibliography. 30

Nelson D. Lewis
Acoustical Engineer
Environmental Noise Program
USACHPPM

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RESPONSES TO COMMENTS

Response to Comment No.28

The correct onset rate penalty is 0 to 11 dB. The information on page G-7 has been corrected. All noise calculations used 0 to 11 dB.

Response to Comment No.29

Table G-1 is reprinted from Federal Aviation Regulations, and is identified in the text as a reprint.

Response to Comment No.30

NRC NAS 1977 was used as a reference in the preparation of this EIS and, as such, is given in Section 7, References.

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OTHER COMMENTORS

OTHER CONVENTIONS



AMERICA'S #1 WOODSRUNNING PUBLICATION

Charlie Richie / Publisher Lynne Richie / Office Mgr.

BACKWOODSMAN MAGAZINE
P.O. Box 627
Westcliffe, CO 81252
719-783-9028

77

April 19th....1996

Gentlemen:

Personally I don't care what your so-called Draft Environmental Impact shows, because when you fly over my house it disturbs me, the animals and everybody else with-in hearing distance. The problem is basically that you, with your various impact studies and double talk, are going to do what you want in the long run. Do not fly over Westcliffe and the Sangre de Cristo's in this region, you and your training missions aren't wanted. 1

I'm sure the words just written will have no impact on you, because the military doesn't give a hoop and a holler what the public wants.

Charlie Richie

Charlie Richie

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).



April 22, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Ave
Andrews AFB, MD 20762-5157

Enclosed please find review comments of the Draft EIS for the Colorado Airspace Initiative.

If you have any questions, please call me.

Sincerely,

Dale Ahlquist
Director
National Airspace Coalition

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A RESPONSE TO THE DRAFT ENVIRONMENTAL IMPACT STATEMENT OF THE COLORADO AIRSPACE INITIATIVE

by

Dale Ahlquist
Director, National Airspace Coalition

INTRODUCTION -

The Colorado Airspace Initiative was an opportunity for the 140th Wing of the Air National Guard to truly develop a long term, comprehensive and responsible military airspace plan for the state of Colorado. It was an opportunity to solve airspace problems rather than create new ones and exacerbate existing ones. One of the keys to solving these problems was to develop a new bombing range and abandon the Fremont (renamed Airburst) and LaVeta MOAs and their adjacent MTRs. The Guard's plans for these components of the Colorado Airspace Initiative have met with vociferous and sustained opposition, representing a clear majority of the affected population. Perhaps the biggest disappointment with the DEIS is that it fails to address the concerns and objections raised by this significant group of citizens. The disappointment is magnified by the fact that this is supposedly one of the most extensive environmental studies ever undertaken by the Air National Guard.

It fails both specifically and generally. Not only are the real issues not dealt with, they are barely even acknowledged. We had hoped for hard data, careful research, and explicit information which would back up a finding of "No Significant Impact." The DEIS has little or none of that. What little data it does have does not support its conclusions. Its conclusions about the airspace plan seem to be pulled out of the air itself. The affected population in the Region of Impact have valid concerns - real reasons - about the potentially detrimental effects low-altitude military overflights will have on their homes and businesses and lifestyles. The DEIS does absolutely nothing to answer their questions or calm their worries. After four years of waiting for a two-volume opus at a thousand-plus pages, we expected some precise, definitive, and meaningful information from the DEIS. But it tries to make up in weight what it lacks in substance.

The purpose of this paper is to revisit and reaffirm the concerns of the affected population and to closely critique the DEIS. It will be submitted as part of the "review comments" to the Air National Guard Readiness Center, with copies to elected officials, to the media, to members of the Colorado Airspace Alliance, and to any other interested parties. The Final EIS must specifically address the questions raised herein, or else it will suffer from the same flaws of the DEIS. More importantly, if these questions are not addressed, it will be evident that the Air National Guard is trying to circumvent the NEPA process and will be in violation its own role as the "Stewards of the Environment."

1

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RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Let me say first of all that I have been able to devote an extensive period of time evaluating the DEIS. This privilege was not afforded to most of the respondents, who are unpaid volunteers forced to consume and digest this huge, prolix document in their spare time. The process is inherently unfair. It took three professional firms and a government agency four years to produce the DEIS. It is absurd to expect a group of volunteer, non-professional part-timers to be able to respond to it in 60 days. 2

The National Airspace Coalition was formed in part to give a voice to citizens who are gravely concerned about what happens in the skies over their heads and who are overwhelmed not only by low-flying jets but by the regulations and the remoteness of the powers that seem to rule those skies. As Director of the National Airspace Coalition, I have had the unique opportunity to travel around the country and learn first hand about the people who live under military airspace. Some of their stories are merely unfortunate, but some are frightening. This is why it is absolutely essential that before the Air National Guard or the Air Force take away any more of the American skies, they listen closely to the voices of the people who live under those skies. 3

RESPONSES TO COMMENTS

Response to Comment No.2

The Council on Environmental Quality provides guidelines for the preparation of Environmental Impact Statements, and the review of EISs by the public and various government agencies. These guidelines direct agencies to "allow not less than 45 days for comments on draft statements" (Section 1506.10 of these guidelines). The comment period for the CAI Draft EIS officially opened March 29, 1996 with the Notice of Availability published in the Federal Register. The initial mailing of the statement to over 750 addressees was accomplished on March 20, 1996 prior to the NOA. The close of the comment period was initially published as June 5, 1996 (68 days), and then extended to July 12, 1996 (105 days).

Response to Comment No.3

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

SUMMARY/OVERVIEW - RESPONSE TO THE DEIS -

I. The Need for this Action (Background of the CAI) - (pp. 5-7)

Although the need for new airspace resulting from the new Denver Airport is legitimate, the main impetus for COANG's airspace expansion predated the Denver Airport and has never been justified.

Two Buttes MOA solves the problem of the airspace which COANG lost to DIA. The expansion in Airburst and LaVeta MOAs and the adjacent MTRs have nothing to do with the new airport.

II. Alternatives - (pp. 7-8)

No serious analysis was given to other alternatives, particularly an alternative involving developing a new range area. The Preferred Alternative has no clear advantages over other alternatives which were rejected without being considered.

III. Training Requirements, Narrowing Criteria, and the Scope of Activities in the Colorado Airspace Initiative - (pp. 8-11)

There are several unanswered questions about what exactly the Colorado Air National Guard and other flying units will be doing or will need to do in Colorado's military airspace. This includes questions about low-altitude training, the number of sorties, and the costs of training.

IV. Anticipated Environmental Effects - (pp. 12-13)

The finding of No Significant Impact seems to have been a foregone conclusion rather than one based on supporting data and thorough analysis. 4

Included in this section is a discussion on the issue of Visual Resources and Aesthetics, an issue which is admittedly difficult and controversial but which has been dismissed out of hand and given no analysis in the DEIS.

V. Noise - (pp. 13-18)

Possibly the most important single issue. The criteria used in the DEIS for judging annoyance from noise is seriously flawed, yet all the conclusions in the DEIS are based on that criteria: Day-night averaging using the FICON standard for communities around airports.

The noise tests conducted in the Region of Impact and other noise studies are evaluated.

VI. Land Use Resources - (pp. 18-19)

There are several examples of outdated information and poor research on the Region of Impact which further call into question the conclusions of the DEIS.

VII. Safety Issues - (pp. 19-20)

Several safety concerns which were raised in the scoping process have not been

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RESPONSES TO COMMENTS

Response to Comment No.4

Responses to these summarized issues are addressed in the responses to the corresponding detailed subsections of Mr. Ahlquist's letter, starting on page 5 of his letter.

addressed in the DEIS, and the methodology of evaluating safety issues is questionable.

VIII. Biological Resources - (pp. 21-26)

A wealth of research information and input from other government agencies has been submitted and then systematically ignored or explained away in the DEIS wherever the evidence might contradict a finding of No Significant Impact.

The effects of noise on wildlife and domestic animals is discussed, as well as an indepth discussion of the Bison Study which was conducted as part of the DEIS.

IX. Cultural Resources - (p. 27)

There is a lot of wasted and worthless information in the DEIS regarding "Cultural Resources" that obviously has nothing to do with military overflights. Yet on those pertinent issues where we would like to see much more information, there is next to none.

X. Air Quality - (pp. 27-28)

Even though fighter jets such as F-16s produce high emissions which will be concentrated in certain areas of activity, it seems to be impossible to create the conditions which would elicit a finding of any significant impact.

XI. Socio-economic Resources - (pp. 28-30)

This was one of the most important issues to the affected population in the Region of Impact. It has not been sufficiently studied in the DEIS. The most important questions about property values, tourism, and economic impacts from military overflights remain unanswered.

XII. Other Questions Which Need To Be Answered - (pp.30-32)

One of the purposes of the Citizens Working Committee meetings was for participants to ask questions of the Air National Guard, which is exactly what they did. The participants were promised answers. The DEIS has not provided any answers. So the questions are here repeated.

4 continued

References (p.33)

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I. THE NEED FOR THIS ACTION (Background of the CAI) -

"The 140 WG is currently mission ready and has successfully passed an Operational Readiness Inspection (ORI) that validates the combat capability of the unit." (DEIS p1-2)

Not only is the 140 WG mission ready, it is one the finest tactical fighter wings in the country. They consistently win top awards in nation-wide contests and war game drills. This has of course been accomplished without any of the additional airspace which CAI is seeking. Because of the new Denver Airport (DIA), the 140 WG is expected to lose part of Kit Carson MOA. This loss of airspace is being used as part of the justification for the CAI, but this loss would more than compensated for by the addition of Two Buttes MOA. What is the justification for the proposed expansion of Airburst MOA and LaVeta MOA and the new MTRs leading into them, which have nothing to do with the new Denver airport? According to the DEIS, the reason is "F-16 modernization." Yet, as noted above, the 140 WG, which already has its F-16s, is maintaining its readiness without this additional airspace.

From a review of documents obtained through the Freedom of Information Act, it is apparent that COANG wanted additional airspace long before it knew about DIA and before it even had F-16s.

The first evidence of this is found in the 140 WG's "Initiative 2010: Seek Heir Space," dated June 1990. This document makes no reference to the Denver International Airport. It states that the 140 WG seeks to add more airspace because of "the changing nature of the threat." "The nature of the threat drives the way we train. As the threat changes, our training must adapt." It never describes "the nature of the threat," nor does it explain how the nature of the threat has changed and how training must adapt to it. It just says that they want the "maximum" airspace, not just an "adequate" amount.

After announcing their desire for more of the sky, they mention that the 140 WG was expecting to get F-16's within 5 years. In other words, the changing nature of the threat had nothing to do with it. They wanted more airspace in which to fly their new planes ("more room to accommodate varied assets of increased capability.") There is, however, no justification for more airspace for F-16s than for A-7s. In a May, 1990 memo from Capt. Steve Krikorian of COANG to Jack Kier of the ANG Readiness Center, he says he is convinced that there is no "standard, coordinated set of desired airspace parameters that relate to the proper accomplishment of a certain type of flying training requirement." In other words, there are no manuals or textbooks or printed requirements that say that a F-16 needs more airspace than an A-7. Yet, the draft OARS for CAI says the F-16 "requires lower and larger airspace to meet recurring pilot and aircraft mission requirements." A direct contradiction.

Worst of all, the "Initiative 2010" document says "Colorado has good training airspace." (p1-4) which flatly contradicts its stated desire for more airspace. It has been the contention of the opponents to CAI that the original proposal was nothing more than an airspace grab. "Initiative 2010" all but admits this. "We realize that the projects of Initiative 2010, when taken as a whole, present an extremely aggressive plan. . ."(Introductory Memo from Krikorian 1 June

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RESPONSES TO COMMENTS

Response to Comment No.5

Even though the LaVeta and Airburst MOAs are smaller than the optimum size recommended by the United States Air Force Master Plan, they perform a valuable function in allowing aircraft to accomplish some training events, for example, ground-to-air threat avoidance and space to re-group for tactical entry to the Airburst Range.

The A-7 aircraft had a very small requirement for air-to-air training normally accomplished in a MOA. It also did not have the radar capability of the F-16 that requires a further distance between aircraft to avoid detection when practicing air intercept or defense evasion maneuvers.

Range alternatives to the Airburst Range are not being considered for the purposes of this EIS. Airburst Range, in its current configuration, adequately satisfies current air-to-ground (surface) mission requirements. At this time, there are no issues that would lead to the immediate closing or reduction in use of Airburst Range.

The Governor's recommendations included a request to examine the long-term viability of Airburst Range. The Air National Guard has honored this request.

A draft Operations and Resources Study (OARS) for the Colorado Airspace Initiative was being developed to replace the Redeye Complex OARS/DOPAA. Upon review of a draft OARS for the Colorado Airspace Initiative, a decision to move directly to a DOPAA was made by the ANG. This DOPAA was used to initiate the Colorado Airspace Initiative EIS process.

The F-16 training missions flown by the 140 WG in Colorado are, to a degree, compromised by the lack of high-altitude airspace to fully conduct AMRAAM training.

Mt. Dora MOA is used by the 140 WG on an infrequent basis (once or twice per month). Edgemont MOA is rarely used, if at all.

When airspace for military training is created and subsequently approved by the FAA, it is with the knowledge that military aircraft from any home station may use it if properly scheduled and assessed. Instances of pilots not adhering to published flight rules for particular routes and MOAs have lent

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How aggressive is aggressive?

In the Operations and Resource Study (OARS) for the Redeye Complex, which was CAI's predecessor, COANG describes the airspace it wants. Again, there is no reference to the new DIA and no need to adjust airspace for the new airport. It refers to "Initiative 2010" to explain the operational need for the new action. "This proposal establishes all areas of the REDEYE COMPLEX to operate at or above 100 feet AGL." The Guard frankly states its desire to fly as low as possible as much as possible in as many places as possible. "Preferred floor is 100' AGL. If, however, significant environmental assessment expense is incurred, 300' AGL can work, and if necessary, we can live with 500' AGL." Also, it is clear from the beginning that this proposal was not only for the benefit of the Colorado Air National Guard. It is "to benefit all TACAIR units training in the Rocky Mountain Area."

Two other important points to note:

1.) In the Redeye Complex OARS, it says "LaVeta MOA as it is currently configured is only moderately useful."

2.) "Initiative 2010" also proposes the relocation of Airburst Range for the following reasons (these are direct quotes from the document, p.6-1):

-Too Small. . .Ft Carson gives us about 4 X 6 NM
-Terrible Airspace Arrangement to accommodate maneuvering
-Problems with Army
-Currently operating on waiver. . .
Airburst no longer acceptable to new USAF STDS
-*Environmentally Saturated*(emphasis added)
-OIC has targeted suitable land about 30 miles southeast of Pueblo, Colorado
-Works great Location-wise

Thus, it was stipulated early on that both LaVeta MOA and Airburst Range were inadequate. Yet the Preferred Alternative for CAI includes both Airburst Range and LaVeta MOA as it was originally configured. Instead of solving its problems by developing a new range and getting rid of LaVeta MOA, the 140 WG kept these controversial components which have been opposed by the citizens of Colorado yet are substandard even to the Guard. What kind of a Preferred Alternative is that?

We have three Draft OARS for the CAI. (Dated November 92, December 92, and January 93) We have never seen an official or final OARS for the Colorado Airspace Initiative. We don't think there is one, which we believe is a violation of Air Force regulations. ***We do not believe the need for this airspace action has ever been clearly established.***

The first Draft OARS is of course a very sketchy document with a lot of blank spaces that are intended to be filled in later. But it is interesting to note that even though no real alternatives have been described or evaluated, it already rejects the No-Action Alternative even before any kind of study has been conducted. In other words, the conclusion was reached ahead of time. It was assumed that the justification for the conclusion would be forthcoming.

We also have several drafts of the Description of Proposed Action and Alternatives (DOPAA). It is interesting to note how the "Scope and Purpose of the Proposed Action" evolves

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RESPONSES TO COMMENTS

some exclusiveness to the scheduling agency. In the case of Colorado Airspace Initiative airspace, other users have been identified and are shown in Volume II, Appendix E.

The Green River Complex was examined and dismissed as an alternative to the Redeye Complex and the Colorado Airspace Initiative. Details may be found in Volume I, Section 2.3.3.2.

Dunes MOA was examined and dismissed as an alternative in the CAI. Details may be found in Volume I, Section 2.3.3.2.

Simulators are currently used to conduct training as directed by AFI 11-F16. Further details of this alternative may be found in Volume I, Section 2.3.3.5.

Airburst C MOA provides an added safety feature that allows military aircraft the opportunity to re-enter the Airburst Range while showing the general aviation pilot airspace more definitively on airspace maps that may have military activity. The airspace is designed to allow the general aviation pilot the opportunity to go through or over the airspace. Airburst C is part of the overall discussion of the Airburst MOA presented in Volume I, Sections 2.2 and 2.3.

The criteria used for "narrowing" alternatives is based upon factors labeled mandatory or desired. Mandatory includes a rule, regulation or law that must be adhered to. Desired is something that would be beneficial if accomplished.

in each successive draft. Besides responding to "priorities afforded commercial air carriers" for DIA, CAI would "provide permanent airspace for the 140 WG" and then provide airspace to "train to execute current USAF doctrine" and later to "develop proficiency to respond effectively to worldwide wartime situations." It is as if they keep groping for a high-sounding rationalization for a decision that has already been made. But whatever the stated need for additional airspace, it has nothing to do with DIA, and it still contradicts the fact, which the Guard admits above, that it is accomplishing its training proficiency right now, without this additional airspace.

II. ALTERNATIVES -

None of the alternatives explored developing a new bombing range at Pinon Canyon or elsewhere, in spite of the fact that the Guard admitting in "Initiative 2010" that Airburst needed to be relocated for many reasons.

Clearly not enough time was spent evaluating other alternatives. Each of the other Existing MOAs and MTRs that were considered as alternatives were rejected for one reason or another for failing to meet the training requirements of the 140 WG and "other military components."

-Cougar MOA was rejected because of not having access to a range, yet it is presently approved for low-altitude training as low as 100 AGL. Was any consideration given to developing a range under the Cougar MOA?

-Mt.Dora MOA was rejected because of "limited vertical development," which seems absurd because the MOA is huge, 102 NM by 82 NM with a floor of 1,500 AGL to 18,000 MSL. Clearly this alternative was not explored fully. Moreover, 140 WG fighters will no doubt train in this MOA, regardless of whether or not it is included in the CAI.

-Edgemont MOA was rejected for its distance from Buckley AFB and its lack of gunnery range. The distance issue is used selectively to preclude an airspace from meeting training criteria, since not only do the 140 WG routinely fly those distances, but they train over the course of the entire route to the more remote locations.

-IR-110 was rejected because of its distance from Buckley and its "exclusivity to the 27th FW." This is interesting because the ANG has always represented to citizens groups that it is unable to maintain any MTR or MOA for the exclusive use of the local fighter wing. Indeed, over one-third of the users of CAI airspace will be from out-of-state wings, whose training requirements are also being considered in developing the new airspace. Yet IR-110 is rejected because of "its exclusivity to the 27th FW." Why can't the 140 WG obtain the same "exclusivity" of the MTRs and MOAs in CAI?

-The Green River Complex was rejected because of the fallacious distance argument. But this alternative would have solved the problems associated with maintaining the Airburst and LaVeta MOAs. Why wasn't this explored further?

-Academy MOA and Dunes MOA are listed as alternatives, but in fact were never really seriously considered as alternatives, nor should they have been. Their presence on the list of alternatives is only to beef up the DEIS. Academy MOA could not have accommodated the 140 WG nor was it ever designed to do so. Dunes MOA has a suspicious history. Was it proposed only as a bargaining chip, something which the ANG

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could ceremoniously withdraw in order to show its willingness to respond to public outcry at the thought of F-16s violating one of the quietest places on earth? It should never have been proposed in the first place.

-No alternative was explored for developing a new range at or near Pinon Canyon. Why wasn't this considered as part of the CAI Preferred Alternative?

-What about the development of a new range in the location noted in "Initiative 2010": "a suitable location about 30 miles southeast of Pueblo."? Why wasn't this pursued by the Air National Guard as part of the CAI? Why wasn't it explored further in the DEIS?

-Though each of the above alternatives was rejected for one reason or another, Airburst and LaVeta MOAs were kept even though they fail to meet the desired criteria for the dimensions of a MOA. (See Below - Narrowing Criteria) They are both too small. Why weren't they rejected as well? It seems as if these decisions were arbitrary? Or is there another factor in the decision which has not been disclosed to the public?

-Why wasn't a plan considered that utilized flight simulators to conduct a substantial part of the training? The DEIS states that one alternative was rejected that relied "exclusively" on simulators. But why consider a plan that relies "exclusively" on simulators? That's a bit extreme and unrealistic. But what about an alternative that "primarily" or "substantially" or even relied "mostly" or "partly" on simulators? No one has ever suggested that the ANG not fly in real planes, only that they not fly over sensitive areas. The greater use of simulators would eliminate the need to fly over such areas, exposing the underlying inhabitants to war-time experiences.

-Three other alternatives were submitted to the ANG which were not evaluated in the DEIS. These were the plans of the CAI Working Committee, the Colorado Airspace Alliance (CASA), and the Custer County Action Association (CCAA). One thing all three of these plans had in common was the elimination of Airburst "C." There is no explanation in the DEIS why Airburst C is indispensable to the Guard's plans.

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The DEIS seems to take great pain to point out that the No Action Alternative is an inferior airspace plan to both the Original Proposal and the Preferred Alternative. In many ways, we would agree. However, we don't feel that the Original Proposal or the Preferred Alternative are responsible plans either. An alternative should have been evaluated that would have eliminated LaVeta and Airburst MOAs and their MTRs.

The DEIS only evaluates three alternatives, all of which are essentially the same. All of them keep Airburst Range in spite of the fact that the Guard admitted in the document "Initiative 2010" that Airburst Range is problematic and is "Environmentally supersaturated." How could the DEIS have a finding of "No Significant Impact" in any of the three alternatives it considers, if they all use a range that was "Environmentally supersaturated" six years ago?

III. TRAINING REQUIREMENTS, NARROWING CRITERIA, AND THE SCOPE OF ACTIVITIES IN THE COLORADO AIRSPACE INITIATIVE -

In any case LaVeta MOA fails to provide enough airspace for optimum training at any altitude. It is less than 60 NM wide and 70 NM long as suggested by the USAF Master Plan.

"The MOA is 40 NM wide and long at the extremes."(p.2-5) But for the most part it is substantially less than 40 NM wide and less than 40 NM long. Besides it is filled with sensitive areas that should be avoided, which practically speaking, a pilot is going to be unable to do if engaged in "realistic" air-to-air combat. It fails to meet the narrowing criteria as good training space (both for the Guard or for the underlying population).

The first item under "Desired Criteria" - minimizing overflight of populated and/or noise sensitive areas - moved back-and-forth from "Mandatory" to "Desired" criteria in the early drafts of the OARS and the DOPAA. It finally ended up being a "Desired" criteria rather than a "Mandatory" criteria. What is the criteria for this criteria? Why isn't it mandatory?

Number of sorties -

-How many overpasses can be expected from one sortie going through LaVeta MOA to Airburst Range? What is the <u>average</u> number of overpasses from one sortie? What is the <u>maximum</u> number of overpasses from one sortie?
-Are all C-130 sorties included in the sortie counts?
-Isn't it true that all sorties to reach Airburst Range will pass through LaVeta MOA? Thus, shouldn't the number of sorties for LaVeta MOA actually be higher?
-Isn't it true, that with the addition of Airburst "C" in the Preferred Alternative, that jets leaving LaVeta MOA can return to LaVeta MOA, accounting for additional overpasses in LaVeta but technically not increasing the number of sorties? What is the purpose of Airburst "C" and why is it so important to this airspace plan? Where is that explained in the DEIS? We couldn't find it.
-The DEIS refers to the "historical" number of sorties. Does "historical" mean <u>actual</u> number of sorties or <u>approved</u> number of sorties? We have frequently asked about the actual usage of the existing airspace because it is our contention that the airspace has not been used to its fullest capacity during the past four years. If that is so, there are two distinct implications: 1.) The 140 WG was purposely avoiding using this airspace in order to avoid complaints about noise and overflights during the EIS process, and 2.) the 140 WG was maintaining its proficiency by training elsewhere. *We request information on the actual numbers of sorties and the number of flight hours in LaVeta MOA, Fremont MOA, and the adjacent MTRs for each of the years from 1990 to 1995, and have those numbers confirmed by FAA.*

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p. 1-2 and 1-3 state that COANG's "primary area" for air-to-air training has been Kit Carson MOA, which has been "severely restricted." By "severely restricted" it means that only about 10 percent of sorties would be "directly and significantly impacted by limitations related to the Denver International Airport." How can an impact on only 10 percent of the sorties constitute being "severely restricted?" Why the increased number of sorties in Airburst and in the MTRs leading into Airburst if there is only a loss of 10% of the sorties in Kit Carson, a loss which is more than compensated for by the addition of Two Buttes MOA?

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It also says that the 140 WG has previously relied on out-of-state deployment and training to accomplish training "not fully supportable in existing airspace." What kind of training? If

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RESPONSES TO COMMENTS

Response to Comment No.6

The number of overpasses made on any one sortie in the La Veta MOA over a specific point on the ground is not predictable.

Sorties or flights that may use La Veta MOA prior to Airburst Range entry may not have sufficient fuel to re-enter and re-exit the La Veta MOA again to access the Range.

C-130 aircraft are not required to schedule or use military special use airspace or military training routes. To perform their missions, they may fly in a manner consistent with general aviation aircraft since they are at a speed below 250 knots. As such, they may traverse anywhere in a flying radius of approximately 400 miles from their departure base.

Flights may enter the range through the route structure that is coincident with the La Veta Low MOA. The Low MOA, because of its size, is not planned to be used as a direct access to Airburst Range.

All sorties identified in the Colorado Airspace Initiative DEIS are actual sorties flown or actual sorties proposed to be flown.

Utilization reports for past years by airspace component are available by contacting the 140 WG at Buckley ANGB.

Response to Comment No.7

All sorties currently flown in Kit Carson MOA are restricted by the FAA both in time available and altitude.

the purpose is to avoid deployment, why are more than one third of the sorties from out-of-state wings? Isn't that deployment? The 140 WG is designing its own custom airspace and inviting others to come and enjoy it. Can Colorado (or any state) afford the luxury of having its Air National Guard units design their own airspace because they do not find it convenient to deploy? Is it environmentally and economically and ethically responsible to underlying residents to keep adding military airspace to the national airspace system to accommodate local Air National Guard units?

The aspect of "contingency tasking" is not fully explained. Why must it be assumed that "contingency tasking" does not fulfill any training requirements? After all, any flight operation is an opportunity for a pilot to maintain his proficiency. Contingency tasking must not necessarily be interpreted as inhibiting training. Moreover, in light of the supposed budget cuts, is it not redundant and expensive to add flight hours for training on top of hours for contingency tasking?

Furthermore, the issue of budget cuts raises several questions:

-What are the actual budget cuts facing the 140 WG which prompt this action?

-What are the actual dollar amounts the 140 WG plans to save by implementing the CAI?

-What has been the cost so far of trying to get the CAI approved (including preparation of the EIS, scoping meetings, publicity, manhours at the ANG Readiness Center and other agencies)?

-What was the cost of trying to get the Redeye Complex approved?

-It is assumed that the only real savings in flying locally as opposed to deploying is in cost of fuel. Has this cost ever been weighed against the costs of trying to get this new airspace approved, including the costs to local economies, and even the costs to citizens who have contributed to the opposition of the CAI? In other words, was this a wise battle for COANG to engage in, just to save gas dollars? If one of the primary purposes of the CAI is to save deployment costs, why are over one-third of the sorties from out-of-state fighter wings? Is it possible that the 140 WG is simply trying to raise its profile by adding airspace and inviting other units to train in Colorado airspace (which was admitted in "Initiative 2010")?

-What are the costs, the real costs, and all the costs of flying a F-16 per hour? Per year?

-What would be the cost of purchasing a F-16 flight simulator for Buckley AFB and how soon would that purchase be paid off by the savings reducing actual airtime (maintenance, fuel, etc.)? (We are not suggesting totally replacing all flight training with simulators but greatly reducing the overflights, which would be more considerate to underlying residents, environmentally and economically more responsible.)

-The primary objection to the CAI has to do with low-altitude training. As long as COANG continues to use Airburst Range and the surrounding low-altitude training space and MTRs, there will be fierce and ongoing opposition. The Guard is certainly aware of this. Such opposition has already served to delay this proposal for four years. Has the 140 WG or the ANGRC weighed the cost of eliminating Airburst and LaVeta MOAs (thereby eliminating the opposition and this whole contentious proposal) against the cost of establishing a new range elsewhere?

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Response to Comment No.8

Deployments by the 140 WG are to perform composite force training or to support real world overseas taskings. Other sorties identified for the Colorado Airspace Initiative are predominantly aircraft that can reach airspace from respective home stations (i.e., Albuquerque and Clovis, New Mexico).

The Colorado Airspace Initiative is not proposed based on budget cuts except for declining dollars to do CONUS deployments.

The total contracted costs associated with the preparation of the Draft EIS, including planning, scoping meetings and responses to scoping comments, interagency coordination, and the actual preparation of the documents, was $1.354 million.

The contract dollar cost for the Redeye Complex was approximately $120,000.00.

The reimbursable cost the Air National Guard forwards to all F-16 C/D units, including the 140 WG, is $1,629 per flying hour. A flight simulator would cost $10 million, not including facility construction, yearly maintenance, utilities, and additional personnel.

Training requirements for all F-16 pilots are outlined in AFI 11-F16. These include a variety of events to be conducted at varying altitudes, including those below 5,000 feet above ground level.

Avoidance of sensitive areas will vary by type of area or use. Some avoidance criteria is contained in various FARs and AFIs. Other avoidances are based upon scientific information. Without specific issues or areas identified, further comment cannot be made. Also, avoidance may be made vertically or horizontally.

An example of safety parameters to fly below 2,000 feet above ground could be cloud cover that may occur while an aircraft is on a route to a particular airspace. Seeing the cloud cover, a pilot would normally fly below it, in most instances. An example of operational parameters would be if a flight member had to reposition the aircraft to maintain visual contact while flying in formation.

Training Requirements (1.4.1-2) -

From almost the beginning of this proposal, we have maintained that there is an over-emphasis on low-altitude training, especially in light of the fact that low altitude tactics are increasingly impractical and undesirable in actual combat situations, the best example being Desert Storm. (See attached Reference No. 1 "Argument Against Expanding Airspace for Low-Altitude Training" and supporting data.) In spite of this evidence, the ANG continues to give undue emphasis to low-altitude training. Of the fourteen types of training tactics listed for MOAs and MTRs, all but two of them involve training at altitudes 500 feet or even lower. This directly contradicts the maxim, "We train as we fight," since all the evidence of the most modern air warfare indicates that low-altitude tactics are undesirable in light of the sophisticated and even not so sophisticated anti-aircraft weaponry of our potential enemies. Air-to-Surface attacks in the Gulf War were from medium and high altitudes. The Pentagon's Report to Congress on the Gulf War acknowledged that in spite of the emphasis on low-level training, none of these tactics weren't used in the War. We have testimony and compelling arguments that the reason the ANG and Air Force maintains such emphasis on low-altitude tactics and will not update and adapt their training requirements is because:

-there is an unwillingness to change with the times, acknowledging the fact that their new technology renders most low-level tactics outdated and unnecessarily risky;
-maintaining low-altitude proficiency is time-consuming and therefore expensive, meaning it justifies training funds and builds up budgets for each fighter wing;
-it's fun for the pilots to fly as low as possible as much as possible. (To quote a certain Rocky Mountain Wing Commander, who shall remain nameless, "F-16s aren't any good for air defense, but they're a kick-in-the ass to fly!")

Before CAI proceeds, it is necessary for the ANG to specifically and convincingly address these concerns about low-altitude training. The old Cold War arguments about "flying under radar" won't work anymore.

Special Operating Procedures and Flying Restrictions (2.4) -

-What exactly does "avoidance" mean? What distance or altitude constitutes avoidance of a sensitive area? Is it more than 500 feet? FAA already has a restriction of 500 feet from any person, vehicle, vessel or structure. Does a sensitive area constitute something more than that definition? Is it more than 1000 feet? FAA already has a restriction of 1000 feet from a populated area? Is a sensitive area something more sensitive than a populated area? How are such "sensitive areas" identified? How are out-of-state airspace users made aware of such areas?
-"Avoidance of sensitive areas. . . by increasing altitude or through other measures." What other measures?
-2000 foot minimum AGL over federally-designated wild and scenic rivers and wilderness areas. What does "whenever safety and operational parameters permit" mean? When is it safer to fly lower than to fly higher? How often and under what conditions do "operational parameters" override the policy to stay above 2000 AGL? Are we to expect this as an excuse every time there is a low-altitude overpass of the Wilderness Areas in the LaVeta MOA? Don't these conditions render the 2000 foot policy rather meaningless,

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and if not meaningless, unenforceable?

IV. ANTICIPATED ENVIRONMENTAL EFFECTS

After concluding that there is no significant impact to any of the environmental resources, including "negligible" impact to cultural, socioeconomic, visual and aesthetic resources, the DEIS states (2.6.2): "Nonetheless, aircraft noise, however brief, is considered by some individuals to be highly annoying, particularly those living with extended periods of solitude."

Here is an important question. What does "some individuals" mean? Has there been any attempt to quantify what number and what percentage of the underlying population is opposed to the proposed military flyovers? Is this considered relevant or irrelevant before concluding that there is "no significant impact"? Surely, the opposition expressed at the Westcliffe Scoping Meeting and the subsequent Information Meeting, the signed petitions, the long list of supporters for CASA and CCAA cannot be characterized merely as "some individuals."

The DEIS is trying to avoid facing the fact that there is strong opposition to overflights in the Region of Impact. It tries to dismiss this opposition as being merely subjective. 9

". . .judgment of quality of life issues are best made by each reader. . ."(2.6.1) The DEIS states that "quality of life" issues are subjective, citing varying reactions to overflights from "a thrilling experience" to "a severe infringement." What percentage and how many of the respondents to the scoping process have characterized the overflights as being "a thrilling experience"? On the other hand, what percentage and how many of the respondents have tended to characterize the overflights as "a severe infringement" or worse? Has the ANG ever taken into account the level of opposition to its overflights in determining the best alternative for its training? Again, the DEIS tries to make "quality of life" a subjective issue, thereby minimizing it as a factor in assessing the impact of overflights. Yet, this has been one of the most important concerns expressed by opponents to the Guard's plan. How can the DEIS conclude "No Significant Impact" if the Quality of Life issue is subjective and left up to the judgment of each reader?

This question is revisited in Section 4.5 - Visual Resources and Aesthetics. Again, the DEIS says, "Quality of life is defined by each individual and can consist of values placed on cultural, socioeconomic, and natural elements of an environmental setting. Due to the subjective nature of the personal reactions to low-altitude military overflights on aesthetics, the analysis is limited to identifying potentially sensitive receptors and the potential impact of noise on these receptors. . ."(4.5.1.2.) 10

This is to callously dismiss the objections raised by numerous residents who testified during the scoping process and also submitted written testimony as part of the EIS process. They are "subjective" and so will not be analyzed. This is an abuse of the NEPA process in that the ANG has only gone through the motions of giving the public a chance to voice its objections and then has summarily ignored those objections on the basis that they are "subjective." Even though the DEIS tries to quantify everything else based on numbers and statistics and assumptions that are questionable at best, here there is no attempt made to quantify the very widespread, consistent, specific and articulate opposition to military overflights in the Region of Impact. The 11

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Response to Comment No.9

Many citizens have expressed concern that their quality of life, which is based directly on the kind of lifestyle that they can enjoy while residing in or visiting the State of Colorado, will be changed by implementation of the CAI. The U.S. Air Force, including the ANG, has been conducting military aircraft operations in the Wet Mountain Valley and the San Luis Valley areas where people are most concerned for approximately 25 years. Most of the military airspace proposed under any of the alternatives is currently in use. Commercial aircraft overflights have also been taking place and will continue to do so. Citizens may notice changes in military aircraft overflights in certain areas associated with the CAI. The number of sorties are proposed to increase moderately in portions of the study area and decrease in others. Overall sorties will be reduced from 5,441 to 4,909 under the Preferred Alternative. The bottom altitudes of several airspaces where citizens are most concerned have been raised to reduce noise levels. Therefore, existing quality of life should not be changed.

Response to Comment No.10

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.11

All comments received during the scoping process associated with this EIS were considered in the preparation of the document. Such comments, as they relate to the proposal, have helped to improve the EIS process and have become a part of the administrative record for the proposal.

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EIS is required to deal substantively with these objections. However, the objections have been reduced to a few generalities, and even these have not been dealt with. Section 4.5 is an utter waste of typescript. After a cursory list of factors which supposedly have been considered, each airspace component is listed by paragraph along with the phrase, "potential impacts would be negligible." But these conclusions are repeated without any discussion of specific reasons which would validate such a conclusion. For instance, it ignores altogether any reference to the Wilderness Areas, except to mention that under the Preferred Alternative, VR-415 will not overfly Greenhorn Mountain. However, La Veta MOA and VR-413 will overfly both the Sangre de Cristo and Greenhorn Mountain Wilderness Areas, yet no mention was made of this. These Wilderness Areas must be considered Visual Resources as must be the National Forests and campgrounds within those forests. No mention is made of them, and no attempt is made to analyze the effects of the overflights on these resources. However, one suspects that if mention were made, it would only be to conclude "potential impacts would be negligible." Even though one of the factors listed in 4.5.1.3 is "Sensitivity of the viewer to the surrounding environmental setting," no attempt is made to quantify such sensitivity on the part of the affected population (other than the qualifying caveat that such sensitivity is "personal" or "subjective"). There is an utter lack of hard data, there is no citing of any supporting evidence which would lead to a conclusion that the impact to the Visual Resources and Aesthetics would "generally be negligible," a conclusion which nonetheless is chanted repetitively over the subsequent - and wasted - pages in Section 4.5. ***This is typical of the entire DEIS: we merely find the conclusions repeated in the all places where the data should be.***

12

There has been no serious attempt to analyze this most difficult issue, which in many ways, lies at the heart of most of the objections to the use of these particular skies for military airspace. However, even a simple analysis would reveal that a majority of residents under the proposed airspace are significantly impacted - whether it be simple annoyance or property damage or personal injury - from military overflights. But this obvious result was avoided and ignored.

And for the DEIS to leave this issue "up to the judgment of each reader" is really useless. It is not the judgment of individual readers which really matters to the ANG. Individual readers do not, for instance, get to vote on the Record of Decision.

However, if they *were* to vote, one suspects the results might be similar to those revealed on page F-15 of Appendix F, in which Prof. Neal Hughes conducted a poll and found 88 percent of the respondents were opposed to the proposed LaVeta MOA and 71 percent opposed to the existing LaVeta MOA. In addition, two separate petitions containing thousands of names of people opposing the overflights were submitted to the Air National Guard and to elected representatives. The DEIS makes no mention of this and does not address this very strong and very tangible opposition to the overflights in the Region of Impact. The 140 WG also seems to ignore this opposition.

V. NOISE - (2.6.1.1, 4.2, etc., and Appendix G, H & I)

4.2.1.2 - The Noise Analysis is based on guidelines suggested by the Federal Interagency

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RESPONSES TO COMMENTS

Response to Comment No.12

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.13

The approach used in the EIS has been modified. The Federal Interagency Committee on Noise (FICON), representing a variety of Federal agencies with a mix of concerns associated with aircraft noise, reviewed aircraft noise analyses issues in 1992. This committee's report (FICON 1992) continued an approach to evaluating relative impacts associated with aircraft noise that has been recognized by noise analysis experts as the most widely endorsed and comprehensive approach to aircraft noise analysis available. This approach to noise analysis was incorporated into the analyses associated with the Draft EIS. In general, Federal land use compatibility criteria are derivatives of guidelines first devised for land near airports. All land use compatibility is based on the use of Day-Night Average Sound Level (abbreviated as DNL or Ldn) as the descriptor representing community noise environments. The criteria treat areas below DNL 65 dB as compatible for all uses, including residential, and they treat DNL 65 dB as a threshold for significant exposure. There is no generally accepted method for treating rural areas differently for these purposes.

However, many EIS reviewers, including some members of the Federal regulatory community, felt the application of the FICON standards, and the 65 dB threshold, to a rural setting was inappropriate for such areas with more quiet ambient noise conditions. Consequently, the use of the 65 dB threshold as the sole means to assess relative impacts or the acceptability of noise levels associated with aircraft operations addressed in the EIS has been modified and the analysis now includes additional information to evaluate potential impacts.

Committee on Noise (FICON). The DEIS acknowledges the limitations of using the FICON guidelines, which were designed to analyze impacts on communities near airports, not quiet and remote rural communities, and especially not Wilderness Areas, ranches, and the like. In spite of this acknowledgement, the analysis in the DEIS is nonetheless based on the FICON guidelines, using a Onset Rate-Adjusted Monthly Day-Night Average of 65 dBs. The entire noise impact analysis for the DEIS rests on this basis, which is a tenuous argument at best, and deceptive at worst.

Table 4-6 attempts to demonstrate in black-and-white what community reactions are to graduated average day-night noise levels. Only in the footnotes, does the analysis give acknowledgement to "an unknown small percentage" who are "highly annoyed" in the quietest settings (which is to say, the problem is not with the noise, but with some people who just complain about it), and "Noise at low levels can still be an important problem, particularly when it intrudes on a quiet environment."

A footnote. That's the only exposure this critical idea is given.

One of the biggest concerns that has been expressed in the scoping process is that sudden, unexpected, extremely loud noise in an otherwise quiet setting, constitutes a greater problem, a bigger impact, and a more intrusive scenario than airplanes landing at an airport in an urban area. The methodology of noise analysis in the DEIS effectively gets around this argument with a mere footnote, admitting the problem, but then promptly ignoring it when reaching its conclusions. 15

Also, several respondents to the Scoping Process, including members from the Custer County Action Association, submitted documentation about the adverse health effects associated with noise, and asked that these issues be addressed in the EIS. The only thing this material elicited in the DEIS is a footnote in Table 4-6, acknowledging the implications of the research on "noise as a factor producing stress-related health effects." But without addressing any of these studies specifically, the footnote abruptly dismisses the issue with the statement, "The relationship between noise and these effects, however, have not as yet been conclusively demonstrated." 16

4.2.1.3 Again, the finding that "predicted noise levels [of military jets flying over Wilderness Areas, even at 2000 AGL] are well below the FICON guidelines" is entirely based on assumptions which cannot in any way be validated. This is a misapplication of the FICON guidelines, which are for developed communities near airports, not for Wilderness Areas. Moreover, they are based on Day-Night averages. Many if not most users of Wilderness Areas are in the area for less than 24 hours. If they are buzzed by a military jet, or by more than one jet, during their time in the Area, the 24 hour-average noise level is meaningless. Their wilderness experience is ruined. Their time in the area is limited and precious, due to the cost of getting to the area, the scarce vacation time allotted to the trip, the desire for the unparalleled peace and quiet and serenity afforded by such places as the Sangre de Cristo Mountains. All of which is totally disrupted if not destroyed by even one military flyover. The DEIS finds the impacts "negligible or minimal," but this is based on the flawed criteria of the FICON guidelines and day-night averaging and altogether ignores the way Wilderness Areas are to be used and enjoyed by citizens. ***If the criteria are flawed, so are the conclusions.*** The DEIS has not even attempted to seriously explore the question of whether or not Military flyovers are even compatible with Wilderness Areas. Even at a 2000 feet minimum altitude, jets can create a noise levels can exceed 100 dB, which provide a horrible contrast from an ambient sound level of 30 17

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RESPONSES TO COMMENTS

Response to Comment No.14

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

Response to Comment No.15

See response to Comment No. 14.

RESPONSES TO COMMENTS

Response to Comment No.16

An additional discussion of human health effects has been added to Volume I of the EIS and can be found in new Subsection 4.13. This new subsection provides more information than previously given in the Draft EIS in Appendix G of Volume II.

Response to Comment No.17

See response to Comment No. 14.

dB.

Apart from the matter of the Wilderness Areas is the matter of low ambient noise levels in the communities and countrysides under the Region of Impact. The FICON baseline of 65 dB cannot be applied to these areas either. It is almost treachery to do so. Moreover, another footnote betrays the attempts to force the 65 dB Day-Night average as a standard for these areas. The footnote appears in Table G-1 (Book II). Land-Use Compatibility With Yearly Day-Night Average Sound Levels.

> ". . .The responsibility for determining the acceptable and permissible land uses and the relationship between specific properties and specific noise contours rest *with local authorities*. (emphasis added) FAA determinations. . . are not intended to substitute federally determined land uses for those determined to be appropriate by local authorities in response to locally determined needs and values in achieving noise-compatible land uses."

The 65 Db level must be thrown out altogether when considering these quiet valleys and towns. FAA not only refuses to use it as a standard but insists that local authorities determine the standards. It seems quite clear that local authorities *have* determined the standards in the Regions of Impact. All of the town councils and most of the county boards of the affected areas have passed resolutions opposing the CAI.

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Did the noise analysis take into account the multiplying factor for more than one jet in a MOA?

Did the noise analysis take into account the fact that jets in MOAs are louder than jets in MTRs? This was confirmed in the EIS for the Northeast Region (which included the proposed Antler MOA). According to that document, SELs must be adjusted upward for jets in a MOA as opposed to a MTR:

> "Aircrews operate aircraft differently under varying training conditions. Along a MTR, speeds are relatively constant, and there is less maneuvering than in a MOA. Conversely, in a MOA, aircraft are maneuvering, and speed and throttle settings vary.
> [This is the caption for Table 2 of the Northeast Region EIS, and the table shows the SELs 12 to 18 dBs higher for jets operating in a MOA as opposed to a MTR.]

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Did the noise analysis take into account the terrain, and the amplifying effect of sound bouncing off the valley walls and mountain ranges?

If these additional factors were not taken into account, the predicted noise levels are too low. If these factors have been taken into account, where is the supporting data?

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If a jet is in a MOA for 45 minutes (which is the average, according to the ANG), and there are 954 sorties in LaVeta MOA, then there will be jets in the MOA for a total 42.930 minutes or 715.5 hours a year, or almost 2 hours a day on average. With that much time in the MOA, it seems that the "Daily Events" total would be much, much higher than 2.2 events a day. Could we see some justification for these numbers? There would especially be higher Daily Event numbers for the northeast corner of LaVeta MOA where 5 MTRs converge. How exactly is the cumulative effect of the use of these MTRs calculated? It seems that if the Daily Events

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Response to Comment No.18

Noise analysis accounted for the number of aircraft, and for the power settings corresponding to each type of operation.

Response to Comment No.19

Noise analysis calculations were performed as if the ground were flat. This is a conservative approach, which tends to overpredict noise levels for the reasons given below. Additional information on the effects of topographic features has been added to Subsection 4.4 of the Final EIS.

Topographic features can sometimes increase individual noise by up to 3 dB (reflections) and can sometimes decrease noise substantially (shielding, often in excess of 20 dB). The net result is lower cumulative levels than predicted from flat ground.

Response to Comment No.20

The number of times per day that an aircraft will be heard is based on the time in the MOA, the percent of time it is at various altitudes, and the noise versus distance relation for each aircraft. Because of the size of the MOA (more than 40 nm across), a person at a given location will hear only a small fraction of the total aircraft activity, if any at all.

The daily events for each MTR include cumulative events in areas where routes converge. Adding the numbers presented would count many events multiple times.

for each of these MTRs are added together, the Daily Events total would be 14 (IR-409:2.8, VR-413:2.8, XIR-424:2.8, IR-415:2.8, XVR-1427:2.8). Also, the Daily Events figures are averages. What is the maximum number of Daily Events that would exceed the 65 dB day-night level? 21

NOISEMAP was designed to calculate noise levels associated with takeoffs and landings at airports. It is not designed to calculate noise levels in MOAs. To use NOISEMAP for this purpose, some other assumptions must have been added to the calculations. What were those assumptions? Isn't it true that the Military has developed a more accurate program than NOISEMAP for calculating aviation noise levels? 22

4.4.4.2 and Table 4-50.

The DEIS claims that in the Preferred Alternative for the LaVeta MOA, there will be no increase from the 48 Ldnmr under the No-Action alternative. Yet there will be an increase from 2.1 to 2.2 in "Daily Events exceeding 65dB" from the No-Action Alternative to the Preferred Alternative. Isn't this a contradiction? Or is it simply a indication of the inadequacy of the Ldnmr calculation? If there is an increase in the number of overflights, even a slight increase, there should be an increase in the noise level. The method of Day-Night averaging, even with an Onset Rate penalty, indicates no increase in the average sound level, yet there will be an increase in the number of Daily Events. Moreover, how could both the Ldnmr and the Daily Event be the same in LaVeta Low MOA as in LaVeta High? Was any actual analysis done here?

Under the Original Proposal, which would have more sorties, more jet types, and lower-altitudes, there was also no change in the Ldmnr, but, strangely enough, fewer "Daily Events." Less than one (.06 according to Table 4-50). Why does the Preferred Alternative have more Daily Events than the Original Proposal? Is it because more jets will be returning to LaVeta MOA via Airburst "C" after dropping their ordnance at the range? 23

Does the "Maximum Cumulative Noise Level" for LaVeta MOA really take into account the increased noise levels caused by aircraft using the five MTRs which will pass through LaVeta MOA? (Two existing MTRs and three proposed.) If it does take into account the noise from the MTRs, how is it possible that with the addition of three new MTRs to the MOA, there is no increase in the Ldnmr? Again, does this represent a contradiction, a lack of thorough analysis, or an indication of the inadequacy of the Ldnmr standard?

Noise Tests -

-Will we ever see the raw data of the noise tests?

-How do we know that the test accurately reflects the actual conditions of a hot MOA? Were the jets maneuvering as they would in a MOA (adjusting the throttle speed in bursts, thereby causing higher noise levels) or flying at relatively steady speeds as they would in a MTR?

-We know the approximate altitudes of the jets, but do we know how far they were from the noise monitors? No. 24

-50% of the events were below 95dB, 90% below 105 dB, but 90% might also have been 1500 feet away from the monitor. The single event that registered 127 dB may have been 1000, rather than 500 feet away from the monitor. We don't know. The field crew at Site 13 observed 2 F-16s using LaVeta MOA on June 23, but did not record the jets'

RESPONSES TO COMMENTS

Response to Comment No.21

The daily event values presented are averages. Any given day is likely to have more or fewer events. From measurements in this type of airspace, it has been found that the maximum number of events on the busiest days is about three times the average. On days with low activity, there may be no events.

Response to Comment No.22

Noise levels in MOAs were calculated using the Air Force's MRNMAP program.

Response to Comment No.23

Calculated noise levels account for numbers and types of operations, aircraft types, and the altitude distribution of operations. The resultant noise levels do not have a simple relationship with any one quantity. All projected noise levels presented in the EIS were calculated.

Response to Comment No.24

The noise measurements reported in Appendix H were conducted within the airspace being evaluated. The relationship of each site to existing active airspace is described. Aircraft within a MOA would have operated as they normally would in a MOA.

distance from the sound monitors, which would have been useful, considering the differences in dB levels.

Day-Night Averaging and the Onset Rate Adjustment -

G-5 ". . .findings substantiate that community annoyance to aircraft noise is represented quite reliably using Day-Night Average Sound Level. . .[this] has been confirmed, even for infrequent aircraft noise events." This is a grand claim. But it is based on a helicopter study, not from a study using fighters and bombers, aircraft which cause a startle reaction. Did the DEIS take into account the testimonies provided by the National Airspace Coalition and the Custer County Action Association from residents of quiet, rural communities who found infrequent aircraft noises highly annoying ("a severe infringement"), even though Ldn was within "acceptable" levels? 25

There is an attempt to justify Ldn by demonstrating how it takes into account loud noise events, which, even if they occur for a few seconds, greatly increase the average sound level. But even by this reasoning, the Ldn is still four times or eight times what it should be in a quiet, rural area. In some of the locations tested and subjected to overflights, the ambient noise level was quieter than a recording studio. Doesn't common sense alone - as opposed to manipulated Ldn numbers - dictate that these places should be left alone and not overflown at all? Has the DEIS truly considered the value of ***natural quiet*** as a scarce national resource? 26

"It is important to note that MRNMAP accounts for a startle effect due to sporadic aircraft events by adding a penalty of 0 to 11 dB." (3.1.4) For instance, a 5 dB "penalty" would be added to sound levels which increase more than 30 Db a second. Where did the value of 5dB come from? Isn't it just arbitrary? Why, for instance, isn't there an Onset Rate Adjustment of 15 dB? or 30 dB? or 50 dB? The Onset Rate Adjustment numbers come from the Air Force. There have been no independent studies conducting to verify their adequacy. 27

The Onset Rate Adjustment may have the effect of doubling the sound level of a particular event, but it is still wiped out by averaging the sound level over a 24 hour period.

The effect of Noise has to be analyzed with more regard to the fact that the ambient noise level (or L90) "ranges from 28 dB to a high of 44 dB for the 17 locations monitored." (3.1.4) and that the average sound level of an overflight was 95 dB (Figure 4-37), representing a range from 74 dB to 115 dB. If "a change in sound level of about 10 dB is usually perceived by the average person as a doubling (or halving) of the sound's loudness," (2.6.2.1) then the difference from the loudest ambient noise level to the quietest overflight noise level has the exponential effect of being eight times as loud. The difference from the quietest ambient level to the loudest overflight sound level would be almost ***128 times louder***. But the impact of these horrendously loud overflights is lost in the fiction of day-night averaging. 28

Perhaps the most glaring example of the misuse of this method is in the findings on pages 2-49 and 2-50, showing that increases of less than 3 dB are not perceptible to the human ear and then applying this factor to a 24 hour average noise level, which is to conclude, in effect, that if a jet flew over only once a day, even if it was 100 dB, if it didn't raise the 24 hour average by more than 3 decibels, you wouldn't be able to hear it! If the average doesn't go up enough, you might not even hear a sonic boom!

Using this method of 24 hour averaging, the DEIS almost reluctantly acknowledges that

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RESPONSES TO COMMENTS

Response to Comment No.25

The applicability of Ldn for infrequent events has been confirmed for military aircraft. Citations of relevant work are included in the text of the Final EIS. The ability of Ldn to account for loud noise events is intrinsic to its validity as a measure of cumulative noise impact.

Response to Comment No.26

The concept of natural quiet as a resource has been added to the Final EIS. This new discussion may be found in Subsection 4.14.

Response to Comment No.27

The onset rate penalty of 0 to 11 dB has been established through a series of controlled studies cited in the text of the Final EIS. These studies were sponsored by the Air Force, but were conducted by independent contractors. Key experiments in this series were conducted in a cooperative effort with the National Aeronautics and Space Administration, using NASA facilities and/or procedures.

Response to Comment No.28

Comment noted. Aircraft noise in the affected areas will be audible. Ldn quantifies the cumulative impact of this noise.

increase in the sound level in Airburst B and C "would be noticeable to the human ear." How does the proponent maintain there will be no significant impact with this kind of an increase in the noise level? *Even by their own reasoning, the "average" sound level would be increased by 15 decibels, or almost three times the present level. Yet this is not considered significant!* How can the DEIS support a finding of No Significant Impact with this kind of an increase in even the average noise level? There is absolutely no question that residents underlying these areas *will* be startled and *will* be annoyed. It is deceptive and irresponsible to issue a finding of No Significant Impact in light of this information. What is the point of gathering the information if only to disregard it?

G-10 Non-Auditory Health Effects -

-There are no studies relating to military overflights.

-On what basis are the findings about noise effects in the workplace "equally applicable to aircraft noise effects in the community environment."? Contradictory studies cited, however the contradictions do not prove the concluding statement that "there is no scientific basis for a claim that potential health effects exist for aircraft time-average sound levels below 75 dB." How was this conclusion reached? — 29

G-12 Sleep interference -

-The idea of sleep interference based on Day-Night Levels has got to be one of the purest examples of the fallaciousness of this kind of noise analysis. It doesn't take a rocket scientist, or even an engineering consultant, to figure out that specific Noise Events are what cause "arousal," not an increase in the *average* noise level. How can the Air National Guard expect anyone to take this seriously? — 30

VI. LAND USE RESOURCES -

Will any threat emitters be installed on any public or private lands under any of the existing or proposed MOAs and MTRs in the CAI? Are there any threat emitters or ground-based electronic navigational, communication or warfare devices presently installed under any of the existing or proposed MOAs or MTRs? Does this DEIS take into account any ground-based devices that might be used in association with the use of the airspace? — 31

3.4.1. On page 3-44, the DEIS states that there is only one public-use airport with a hard surface runway under LaVeta MOA. There are two. Silver West airport is also a public-use airport with a hard surface runway. The runway was paved in 1994. This was well before the completion of the DEIS, but obviously no one bothered to update this information. — 32

3.4.2.1 Also on page 3-44, the DEIS states that agricultural activities in the Region of Impact under LaVeta MOA include ranching: "The primary types of livestock in the ROI include sheep, hogs, and chickens. No cattle feedlots are located in the ROI." This is wrong. Cattle is the primary livestock in the ROI. Secondly, the most important livestock in the ROI is horses, including prize-winning Appaloosas at Wolf Springs Ranch. Moreover, there is probably only one sheep ranch and virtually no hog or chicken operations. — 33

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RESPONSES TO COMMENTS

Response to Comment No.29

An additional discussion of human health effects has been added to Volume I of the EIS and can be found in new Subsection 4.13. This new subsection provides more information than previously given in the Draft EIS in Appendix G of Volume II.

Response to Comment No.30

Individual sleep disturbances are caused by individual noise events. Multiple noise events can cause multiple disturbances. Ldn measures the combined total of all events, thus predicting the cumulative impact on sleep.

Response to Comment No.31

Threat emitters are not anticipated nor a part of the proposed Colorado Airspace Initiative. Existing threat emitters occur on Airburst Range and the La Junta Strategic Training Range. Navigation aids are limited to normal radio frequencies and the support equipment operated at Airburst Range and various airports in southern Colorado.

Response to Comment No.32

Comment noted. Text changed in Subsection 3.4.1.

Response to Comment No.33

Comment noted. Text has been changed in Section 3.4.2.1 to include cattle and horses. Although cattle may be raised within the region of influence, there were no major cattle feedlots identified.

The erroneous information in these two paragraphs indicates several things: (1.) the carelessness and inadequacy in the preparation of the DEIS, (2.) the outdatedness of the information being relied upon in the DEIS, (3.) the uncritical, repeated use of boilerplate language in the DEIS (4.) the faulty analysis and erroneous conclusions which are inevitable if based on faulty data. 34

Another example of this poor research is in the outdated demographic information regarding Custer County. (3.4.9.1) Although showing the phenomenal growth in Custer County from 1970 to 1990 (an increase of 72%), the DEIS fails to show the growth from 1990 to 1995, another 39%. These figures are available from the U.S. Census Bureau. Also, according to the Census Bureau, Custer County's growth from 1994 to 1995 (8.9%) made it the 19th fastest-growing county in the United States. 35

According to Todd Lloyd, of Westcliffe, a consulting engineer and a member of Custer 2020, an organization studying the growth of Custer County, peace and quiet and solitude are what draw many of the new residents. "People are moving here because it is an opportunity to leave behind the undesirable qualities of the cities." (*Pueblo Chieftain*, March 9, 1996, p.2A) 36

The obvious analysis which obviously isn't taking place is twofold: If one of the reasons for the growth is that people are seeking the peace and beauty of the Wet Mountain Valley and the Sangre de Cristo Mountains, what kind of impact will the overflights have on that growth? Secondly, even assuming that the DEIS is correct, and there is "no significant impact" on the growth, is this growth being projected into the future so that it is understood how many more people will be impacted by these overflights? Is it not likely that the increased population will mean more complaints, more opposition to the overflights, more disenchantment with the Air National Guard? We hope the ANG has not totally ignored the fact that opposition from Custer County residents is very strong. It is logical that an increased population will result in even greater opposition to military overflights in the area. 37

It should also be noted that the Pinon Canyon area has a very low population both in total population and population density. The area does not represent any of the economic resources such as tourism and wilderness recreation represented by the ROI under La Veta and Airburst MOAs. Moreover, it is already owned in a large part by the U.S. Army. It would seem to be a wise use of a shared resource to use this area to develop an alternate site from the Airburst Range. It quite obviously should have been more fully evaluated as a place to develop a new range area, thus eliminating the potential impacts from the LaVeta and Airburst MOAs. 38

VII. SAFETY ISSUES -

There has been a noticeable increase of military crashes since the DEIS was prepared and since the dates of the studies used in the DEIS. Will this be taken into account for the final EIS or will we continue to see old statistics? 39

Are other factors taken into consideration besides the mishap rate? For instance, the inability of a rural emergency squad to deal with a crash. The DEIS states, "The NGB will provide training on aircraft accident response requirements to any emergency response agency in the area. . . upon request." Is this sufficient? Has the NGB made any investigations about 40

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RESPONSES TO COMMENTS

Response to Comment No.34

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.35

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.36

There would be some changes in sortie numbers, noise levels, and airspace dimensions under the Original Proposal and the Preferred Alternative addressed in the EIS. However, overall flying hours of the 140 WG will be reduced from 5005 hours to 4600 hours. When compared to existing military aircraft training in the study area, these changes would not change the current levels of solitude and peace and quiet experienced by residents. As under current conditions, noise from military aircraft operations may periodically disturb citizens and affect their enjoyment of solitude; however, opportunities for abundant periods of total peace and quiet would continue as under present conditions.

Response to Comment No.37

Military overflights have been occurring in the CAI study area for approximately 25 years. Data presented in the EIS from the U.S. Department of Commerce show that many counties have experienced population growth during this time. Because the Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope and overall flying hours would be reduced, it would not be expected that population growth would be significantly adversely impacted compared to the No-Action Alternative (i.e., baseline conditions).

Population forecasts have not been included in the EIS. Under the NEPA, agencies are required to use existing information and, therefore, socioeconomic resources are based on historical data. It is possible that increased population in the future could result in additional noise complaints.

Response to Comment No.38

The use of other training areas was examined as part of the development of the alternatives studied in detail in the EIS in Subsection 2.3. The proposal was designed to minimize conflicts with potentially sensitive areas while providing the training resources necessary to meet military readiness requirements. Specific narrowing criteria for the selection of military training airspace (see Subsection 2.3.3 in Volume I) were used to evaluate other locations, and no alternative training areas were identified that could be substituted for the airspace configuration proposed in the alternatives studied in the EIS.

The primary user of the airspace included in the Colorado Airspace Initiative is the 140 WG based at Buckley Air National Guard Base in Aurora, Colorado. Because of limited resources and aeronautical constraints, virtually all of our nation's fighter units train in airspace that is within a "tank of gas" of the aircrews' base.

Response to Comment No.39

The Final EIS uses aircraft mishap data from FY 1992-1996.

the present capabilities of local emergency crews? Isn't it presumptuous on the part of the NGB to offer training before asking the opinions of local emergency crews? Maybe they don't want the training because they don't want the potential of a military crash in their area? Or was this ever considered?

There is additional concern about the cleanup following a crash. In Wisconsin, a F-16 crashed in the Summer of 1995. According to the Wisconsin Department of Natural Resources, after several months, the crash site still had not been cleaned up. The Wisconsin Air National Guard would not make any comment. (See attached Reference No. 2) 41

The causes for recent crashes in Alaska and Tennessee were the very things that we fear happening in the Region of Impact: a collision with a flock of geese and a hot-dogging pilot. (See attached Reference No. 3) Bird collisions are raised as a concern by both the Colorado Division of Wildlife (as noted in Appendix K) and in the comments from the scoping process. Even though the DEIS notes the migratory patterns of geese and ducks through the Region of Impact, it still manages to conclude that there is no significant impact. One "impact" would be significant. Fatal. 42

We feel the potential for a fire caused by the jets has not been fully evaluated. Obviously there is great concern about fires in this area which is home to two National Forests. It's not just crashes that can start fires. In areas with low rainfall, it takes a lot less. Just a spark. And low-flying military jets produce sparks and a lot more. A flare discharged at a low altitude could be disastrous. Also, according to the manager of the Buenos Aires National Wildlife Refuge in New Mexico, low-flying military jets started at least three fires in 1993 and 1994. Simply from flying too low. I spoke personally with the manager of the Wildlife Refuge and he confirmed this. What makes it worse was that the DOD claimed the Wildlife Refuge wasn't being overflown at all. Were these incidents investigated as part of this DEIS? I think not. 43

The 140 WG has a very good safety record. What are the safety records of the other flying units that will be using the airspace?

The DEIS gives the 1990-94 mishap rates for F-16s, F-111s, F-15s, A-10s, and B-1's but not for other planes which will be using the airspace, including the F-14 (which recently has had a very poor safety record, which should be analyzed for the final EIS), B-52, C-130, and KC-135.

According to Table 4-14, there will be no F-15s in the LaVeta MOA under the Preferred Alternative. Is that true? 44

The likelihood of a mishap would seem to increase on a low-level MTR, especially over mountainous terrain, would it not? Yet the Mishap Rates for the MTRs in the CAI do not take this into account. There is no adjustment in Mishap Rates for low-altitude training, where the risk of mishap is obviously greater. This calls into question the entire analysis, or rather, it points to a deficiency in the analysis. The mishap rates have been simply plugged in with no further consideration for the type of training or the type of airspace.

There is a deeper and perhaps more delicate question which needs to be explored. It has to do with the *inevitability* of a crash rather than the *probability*. Accidents will happen. It's only a matter of time. The fact that there has never been a crash in the Wet Mountains is, unfortunately, a strong argument that there will be one. As the flight hours increase, the statistics will catch up. The only sure way to prevent a F-16 from crashing in those mountains is to 45

Response to Comment No.40

Initial response to an aircraft accident is the responsibility of the civilian authorities nearest the crash site, who would provide emergency services such as fire, police, and medical assistance, as necessary. It is the responsibility of the civilian unit responding to an aircraft accident to determine what response actions they are capable of performing, including the evaluation of proper personnel training and response equipment. If the responding unit is not capable of performing certain response actions, they should request assistance from the nearest civilian unit capable of performing the required response. In the event of an aircraft accident, the nearest USAF installation would be notified by these authorities. In most cases, the nearest USAF installation would have been previously notified by the USAF unit associated with the downed aircraft. Upon notification of the aircraft accident, the commanding officer of the nearest USAF installation dispatches a Disaster Response Force. The Disaster Response Force includes personnel who have been trained to respond to this type of occurrence, and would include disaster preparedness, security police, medical, fire department, legal, munitions, mortuary, and others as required. The Disaster Response Force would assist local response teams in matters of fire suppression, site security, medical treatment and evacuation, accident evaluation and investigation, retrieval of classified materials or equipment, and protective measures, such as munitions disposal and hazardous/toxic materials protective measures. When necessary, the Disaster Response Force would coordinate activities with other regional response forces to ensure all personnel and equipment are obtained for proper mitigation and control of the accident site. It is the ANG policy to provide training, upon request, on aircraft accident emergency response to any recognized emergency response agency.

Response to Comment No.41

The ANG/DOD would be fully responsible for any soil, water, or groundwater contamination, property damage or destruction, and injury or death to persons caused as a result of an ANG/DOD aircraft accident. Awards resulting from this type of incident would be determined on a case by case basis. The ANG/DOD, or its designated agent would be responsible for full evaluation and remediation, if required, of any contamination at an aircraft accident site.

Response to Comment No.42

The USAF has established a Bird/Aircraft Strike Hazard (BASH) Team to implement procedures to prevent and reduce the threat of bird/aircraft strikes, and to investigate and track any bird strikes that occur. In addition, each USAF/ANG base or flying unit is required to establish a BASH program to minimize the risk of bird strikes both at the base airfield and in airspace training routes for the unit. The USAF BASH Team assists each base or flying unit by providing Bird Avoidance Model (BAM) graphs. These graphs estimate the relative bird strike risk for flying along a specific low-level route or operations area. The model is developed on the basis of waterfowl and raptor migration and concentration data. The BAM graph depicts the severity of the bird strike hazard at a particular time of day, month, and segment of a low-level route. This information is used by the flying unit to determine the optimum route schedule and avoidance measures to be taken to prevent bird/aircraft strikes. In addition, the unit publishes Notices to Airmen (NOTAM) to alert transient aircrews to specific bird migration hazards, activity periods, and avoidance procedures.

Response to Comment No.43

The F-16 aircraft and other aircraft associated with the CAI do not emit sparks during normal flight operations.

Safety issues associated with military aircraft operations, including the use of flares, are discussed in detail in EIS Sections 3.1.3 and 4.3.1. All of the units associated with the CAI would be permitted to dispense flares during military aircraft operations in CAI airspace. The use of flares for training would be limited to MOAs, and would be restricted to altitudes greater than 2,000 feet above ground level (AGL)

Response to Comment No.44

Comment noted. Text changed in Table 4-14.

Response to Comment No.45

The mishap rate calculated by the HQ USAF Safety Office does not separate the mishaps by type of flight activity or mission being conducted. The mishap rate therefore represent all mishaps regardless of training scenario, including new pilot training, low level flights, takeoffs and landing, night flying, air-to-air refueling, and contingency/combat flights associated with missions such as Desert Storm and Bosnia. Therefore, using the overall mishap rate for aircraft as calculated by the HQ USAF Safety Office represents a conservative estimate for mishaps. In addition, the calculations performed for estimated annual mishaps included the Class B mishap rate for each aircraft. Class B mishaps are defined as resulting in total with costs in excess of $200,000 but less than $1 million in property damage, permanent partial disability, or hospitalization of five or more people. Therefore, many Class B mishaps do not involve an actual aircraft crash. In the February 1996 report on Military Aircraft Safety from the General Accounting Office (GAO) to the U.S. Congress, the GAO determined only Class A mishaps were relevant to the report. Therefore, the rates in the EIS reflect a more conservative estimate for estimated aircraft mishaps than the GAO used in its report to Congress.

prevent them from flying there. We don't want a jet to crash anywhere, but they will continue to crash in the places they fly. This is not a place that should be subjected to such a disaster.

VIII. BIOLOGICAL RESOURCES -

How is it that the community noise level of 65 dB can be applied to wildlife and endangered species? On what basis? Aren't we seriously mixing up our standards here? The 65dB was used in regards to developed communities around airports. Does the NRC NAS specifically use the 65dB day-night level? Could we see the documentation on that? According to the DEIS, the National Research Council says that protective noise levels for animals can be taken to be the same as those for humans. What exactly is a "protective noise level?" Is it logical to apply the method of day-night averaging to animals when it is already questionable to apply it to humans, even those who can sometimes be swayed by statistics? It is specifically noted throughout even the DEIS that animals react to noise events, not 24-hour noise levels. - 46

Wildlife -

Appendix K reprints letters from U.S. Fish and Wildlife, the Colorado Division of Wildlife, and other agencies, which raise specific concerns. Where are these concerns specifically addressed, especially those which fly in the face of a finding of No Significant Impact? The Colorado Division of Wildlife letter dated September 14, 1993, says that the area around Airburst is already "environmentally saturated" (there's that phrase again - this time from an entirely different source) and, in reference to the CAI, concludes "Such airspace will result in significant impacts to wildlife and to recreationists." How did the DEIS come to such a drastically different conclusion? Furthermore, the CDOW said that the conflicts to Peregrine Falcon could be avoided by abandoning MTRs such as IR-413. How does the DEIS find "no adverse impacts" to any wildlife, including Peregrines, from VR-413 or any of the MTRs? - 47, 48

4.6.1.3.4 What about these supposedly "on-going" discussions with U.S. Fish and Wildlife Service? Why is the substance of these discussions not related to the public in the DEIS? After taking four years to prepare this document, how can the ANG possibly tell us we must wait for the Final EIS for the results of these discussions?

We know that the U.S. Fish and Wildlife Service and the Colorado Department of Wildlife have expressed grave concerns about military overflights. The DEIS acknowledges this by including correspondence from these agencies in the Appendix and by noting the existence of an informal committee with these agencies to "discuss and resolve issues associated with the Colorado Airspace Initiative." Specifically, what issues have needed to be resolved? And how were they resolved? - 49

"None of the threatened and endangered species recovery plans reviewed for the sensitive species associated with the Colorado Airspace Initiative identify military jet operations as a threat to the species' success rates, habitat usage, or recovery." However, were military overflights even considered in these studies? Did either of these Department of Interior reports specifically evaluate raptors or owls attempting to nest under a MTR? On what basis were these conclusions reached? How were such conclusions reached when the observed behavior of these birds certainly contradicts these reports. - 50

RESPONSES TO COMMENTS

Response to Comment No.46

The analysis of the potential impacts to wildlife associated with the Colorado Airspace Initiative included a comparison of the existing noise environment to the modeled noise environment of the Original Proposal and the Preferred Alternative. The models predicted not only the Day-Night Average Sound Level (Ldn), but also the number of daily noise events that exceed a 65 dB Sound Exposure Level (SEL). The assessment of the predicted change in the noise environment on wildlife was augmented by interviews with wildlife biologists and resource managers, several studies conducted specifically for this EIS, as well as an extensive literature review. All references to the 65 dB noise level as a "benchmark" to analyze noise impacts to wildlife have been removed from the Final EIS.

Response to Comment No.47

Studies conducted on wildlife have shown that numerous wildlife species have the ability to adapt to the presence of man and various man-made sound sources, including jet aircraft noise. While the noise generated from low-altitude military overflights may be initially startling, habituation to jet aircraft noise occurs with most wildlife species. Species-specific responses to low-altitude overflights vary considerably, and responses from individual animals may have the potential to cause injury. However, wildlife populations are usually affected only when a variety of factors work in combination to impact them, including declines or fluctuations in the availability of a food source, habitat destruction or alteration, predation, hunting, trapping, poaching, disease, or inclement weather, rather than noise alone. Normally, it would be unrealistic to predict or attribute any wildlife population declines to a single stressor, such as noise. In addition, no published scientific evidence was identified that indicated harm may occur to wildlife as a result of exposure to the levels of noise generated by military aircraft that would utilize the airspace associated with the Colorado Airspace Initiative.

Response to Comment No.48

The ANG has been and will continue to work with the U.S. Fish and Wildlife Service, the Colorado Department of Natural Resources, the Bureau of Land Management, and other regulatory agencies to study the effects of their actions on threatened and endangered species within the areas affected by its operations. Representatives from these organizations meet periodically in a Coordination Group to discuss and study species of concern. Some ongoing study activities are currently funded by the ANG, including a study with the U.S. Forest Service on the Mexican Spotted Owl. The ANG will continue this cooperative effort and adjust its operations should any of these studies identify potential impacts on any threatened or endangered species.

Response to Comment No.49

Several areas, including peregrine falcon nest sites, were identified by the U.S. Fish and Wildlife Service and the Colorado Division of Wildlife as being particularly sensitive to military aircraft noise. Avoidance measures for these areas were developed, further reducing any potential impacts that could be attributed to the noise generated by activities associated with the Colorado Airspace Initiative. A summary of these mitigation measures is presented in Section 4.18 in Volume I of the Final EIS.

Response to Comment No.50

The recovery plans for the threatened and endangered species occurring within the region of influence for the Colorado Airspace Initiative identify a number of human-induced impacts that could adversely affect these listed species. Military aircraft operations were not identified as affecting the recovery of these species. While the recovery plans did not specifically evaluate these species attempting to nest under a MTR, numerous additional studies have assessed the impacts of military aircraft on raptors. This preponderance of current data, coupled with specific avoidance measures, lead to the conclusion that the activities associated with the Colorado Airspace Initiative will not adversely affect any listed species within the region of influence. Results of the consultation process with the U.S. Fish and Wildlife Service under Section 7 of the Endangered Species Act are presented in Appendix Q in Volume II of the Final EIS.

As for wildlife in general, why is no mention made of the report from Defenders of Wildlife, "Unfriendly Skies: The Threat of Military Overflights to National Wildlife Refuges," which, based upon a survey of managers of wildlife refuges, concluded that the *number one problem and threat* to the animals in these refuges was from military overflights. I was quite sure that we had submitted a copy of this report as part of the EIS process, but since it was not cited, we can only conclude that it was mislaid somewhere at Andrews Air Force Base. So we are submitting another copy of that report. (See Reference No. 4). We expect to see this issue specifically addressed in the final EIS, and we would like to have it explained to us how the EIS can still have a finding of no significant impact in the face of such contrary evidence. 51

Deer and Bighorn Sheep-

4.6.1.3.2 It says that extensive studies have been done on such animals as deer and bighorn sheep, yet the DEIS resists applying the conclusions regarding the disruptions to animals to its own conclusions. "While it is possible to predict behavioral responses, it is unknown whether large herbivores are adversely affected by overflights." In other words, we know how these animals respond to loud noises (i.e. they are disturbed), but we aren't sure what that means, so we'll just keep causing the loud noises. Isn't a behavioral response worth something? Doesn't a charging, fleeing, or obviously agitated animal demonstrate that it is being adversely affected? Why the scientific doubletalk? 52

Surely the ANG is aware of the strong opposition to military overflights which has been expressed by the Foundation for North American Wild Sheep. Their opposition to military airspace expansion in Idaho is well known. They have conducted studies which clearly demonstrate the adverse effects of military overflights on bighorn sheep. Why are the specific results of these studies ignored?

The DEIS is very selective about reaching conclusions. In the section on Aesthetic Resources, it concludes that there is No Significant Impact but offers no evidence for the conclusion. Here in the Section on Biological Resources, where there is a myriad of evidence to consider, it finds the evidence inconclusive. This is demonstrated again in reference to the studies on songbirds. 53

Songbirds-

Although the DEIS cites a study showing reproductive losses to these birds after exposure to low-altitude overflights, the very next sentence says, "Studies of the effects of low-altitude aircraft overflights on small songbirds are few and flawed." Isn't this a direct contradiction? Isn't this saying, in effect, "We do have some studies showing adverse effects, but we have chosen to discredit or disregard them."?

Raptors -

The DEIS cites a study that claims that raptors are extremely tolerant to noise levels that would likely be unacceptable to humans. However, I submitted a videotape as part of the EIS process, which featured testimony from a scientist at a raptor center in Pennsylvania that directly contradicted that finding. At Shavers Creek Raptor Center, which is owned and operated by Penn State University, Navy fighter jets flew over, causing the raptors to become very distressed: falling off their perches, injuring themselves, necessitating anabolic steroid treatment for stress.

RESPONSES TO COMMENTS

Response to Comment No.51

Comment noted. Information pertaining to this subject was added to the EIS. See Subsection 4.6 in Volume I of the Final EIS.

Response to Comment No.52

Studies conducted on wildlife have shown that numerous wildlife species have the ability to adapt to the presence of man and various man-made sound sources, including jet aircraft noise. While the noise generated from low-altitude military overflights may be initially startling, habituation to jet aircraft noise occurs with most wildlife species. Species-specific responses to low-altitude overflights vary considerably, and responses from individual animals may have the potential to cause injury. However, wildlife populations are usually affected only when a variety of factors work in combination to impact them, including declines or fluctuations in the availability of a food source, habitat destruction or alteration, predation, hunting, trapping, poaching, disease, or inclement weather, rather than noise alone. Normally, it would be unrealistic to predict or attribute any wildlife population declines to a single stressor, such as noise. In addition, no published scientific evidence was identified that indicated harm may occur to wildlife as a result of exposure to the levels of noise generated by military aircraft that would utilize the airspace associated with the Colorado Airspace Initiative.

Response to Comment No.53

Comment noted. Text changed in Subsection 4.6.1.3.2 in Volume I of the Final EIS.

When informed of the incident, the Navy immediately ceased flying over the area, especially because some of the raptors were endangered species. No reference was made to this evidence in the DEIS. This seems to indicate that if there is a study supporting the ANG's proposal, the study is presented as being conclusive, and no contradictory positions are even acknowledged. If the study might be adverse to the proposal, it is presented as "flawed" or "inconclusive."

Domestic Animals -

-Information and testimony was submitted during the Scoping Process about several incidents of riders being bucked off horses due to overflights in the Region of Impact. Also there was the documented report of a macabre incident of horse kicking itself to death in a stall due to an overflight. Why is no mention made of these incidents? How many instances of the startle effect are needed to arrive at a "significant" impact?

-Why has the Colorado Horseman's Council opposed the Guard's proposal? Don't they know anything about horses?

-Is the proponent aware of recent incident which occurred when U.S. Troops were recently deployed to Bosnia that the following incident occurred? The Bosnian state-owned dairy is located one mile from the airport in Tuzla, Bosnia. Within 48 hours from the time that U.S. C-130s began transports, milk production went down by about 20%. The Bosnian government complained to the U.S., who will likely pay damages for the drop in milk production due to noise from U.S. military planes. In light of that incident, how can it be maintained that there would be no significant impacts to livestock from military overflights?

-Similarly, is the proponent aware of a recent domestic incident which occurred in Soldiers Grove, Wisconsin? C-130s flew over a farm owned by Jack and Nancy Hobbs. Several animals were panicked, including goats and cattle. They overran fences, some injured and maimed themselves, some were killed, and some pregnant goats miscarried. Also all the milking goats ceased to produce milk for an extended period of time and developed mastitis. This same thing happened on two separate occasions within six months. The Hobbs have filed claims with the Air Force and Air National Guard. 54

-Is the ANG aware of problems caused to the cattle herd owned by Tex Elliot of Ft. Sumner, New Mexico? On several occasions, including three nights in a row in December, 1993, F-111s flew over his ranch, causing his cattle to overrun fences and escape. He's filed claims with the Air Force and has made numerous complaints about overflight violations which the Air Force has consistently denied.

-According to sources in the Air National Guard who prefer to remain unnamed, the ANG *routinely* pays damages to farmers whose animals are injured, killed or experience miscarriages as a result of the startle effect caused by military jets. Is this true or isn't it? Does the ANG have figures for the amounts paid in damages and the number of these incidents in the last five years? 55

Research papers by Dr. Susan Clark will also be submitted herewith. (See Reference No. 5). These are studies conducted on rhesus monkeys. Unscheduled noise events caused stillborn births and chemical imbalances from stress. The conclusion was that any animal exposed to this 56

RESPONSES TO COMMENTS

Response to Comment No.54

It is possible that aircraft noise could startle domestic animals, especially young or penned animals, and cause them to injure themselves. However, animals adapt and habituate to various sound sources, including jet aircraft noise. Because the airspaces associated with the CAI are mostly existing airspace that have been utilized for over 25 years, this adaptation and habituation to jet aircraft noise has likely already occurred.

Response to Comment No.55

Compensation for damages associated with aircraft overflights is handled on a case-by-case basis. If damage occurs, affected citizens should contact Peterson AFB. The address is: 21 SW/JAD, 616 Mitchell St., Suite 540, Peterson AFB, CO 80914-1154. The telephone number is (719) 556-4871.

Response to Comment No.56

The use of rhesus monkeys as a comparative species to any species occurring within the region of influence for the Colorado Airspace Initiative is irrelevant.

kind of noise would be clinically traumatized.

Isn't it also true that the ANG possesses a report showing that, contrary to the claim that animals adjust or become acclimated to loud, stress-causing noises or to the "startle effect," animals are instead imprinted with fear and start panicking when they feel the vibration even before they hear approaching low-flying aircraft? I do not have the report. I've talked with people who have seen it and who know that the Air National Guard is aware of it. I would either like to see the report released or hear the Guard deny any knowledge of such a report. 57, 58

BISON STUDY (Appendix J) -

Our first question concerns the objectivity and expertise of crew which conducted these tests. Three members from the Air National Guard, a ranch hand, and one of the EIS contractors. No outside observers were present, no wildlife biologists, and no members of the citizens groups from the Colorado Airspace Alliance. Why? 59

The objectivity of the crew is called into question by certain conclusions it reached. "The yearling bison herd. . . was observed to have a major reaction to overflights at an altitude of 500 feet [AGL] directly overhead. However, it was concluded that this reaction may have, at least in part, been the result of the herd's heightened anxiety level due to the close proximity of the ground crew. It was concluded that under normal conditions the herd would have exhibited a minor behavioral reaction to the overflight occurrence." (p.J-1) There is no basis for this conclusion. In fact, it contradicts the observations. Moreover, it directly contradicts the statement on J-13 that the ground crew took "extreme caution when approaching the herd so that the herd would not be disturbed prior to the overflights." 60

Apparently this crew adhered to the old scientific adage, "If the facts don't fit the theory, the facts must be disregarded."

Prior Research on Bison -

-In the Oklahoma Study the decibel level of the overflights was much lower than that of the recorded overflights in the Wet Mountain and San Luis Valleys. Did the Oklahoma Study take into account sudden, unexpected noise from high-speed aircraft, as opposed to a relatively slow-speed flyby? Did the Oklahoma Study take into account breeding and calving cycles? yearling bison? Ambient noise levels? 61

Video recordings -

-Videotape of what appears to be the feedlot herd (but may be the cow/calf herd) was provided to the Center for Defense Information, which made the videotape available to the National Airspace Coalition. The bison on this tape are heavily involved in feeding and do not appear to be disturbed by the overflight (the altitude and speed of which is not apparent from the tape). In spite of the voice of the observer in the background saying, "not a damn thing," and the relatively docile behavior of the herd, we did observe some bucking and agitation among some of the animals. This was the only video of the bison which we have seen. We did not see any of the video of the "major reactions," only of the so-called "no reactions." 62

RESPONSES TO COMMENTS

Response to Comment No.57

The ANG is not aware of any such report.

Response to Comment No.58

It is possible that aircraft noise could startle domestic animals, especially young or penned animals, and cause them to injure themselves. However, animals adapt and habituate to various sound sources, including jet aircraft noise. Because the airspaces associated with the CAI are mostly existing airspace that have been utilized for over 25 years, this adaptation and habituation to jet aircraft noise has likely already occurred.

Response to Comment No.59

The "Bison Study" presented in Appendix J was intended simply to observe the reactions of the bison to low-altitude F-16 overflights and to determine if a herd stampede was likely to occur. This observational study was accomplished at the request of certain members of the Citizen's Working Group. Members of this Working Group were invited to participate in the observations. In addition, several media representatives were present to observe the overflights. The observational study was never intended to evaluate other behavioral or physiological reactions of bison to aircraft overflights. The EIS authors relied on other existing published studies based on more detailed scientific methodologies to provide information on various other behavioral or physiological reactions of animals to aircraft noise.

Response to Comment No.60

Comment noted. The text of the Final EIS has been modified to state that additional observations may be necessary before any definite conclusions can be reached concerning the impacts of military aircraft overflights on yearling bison.

Response to Comment No.61

The Oklahoma Study was conducted solely to observe the behavioral reactions of bison to low-altitude military aircraft overflights.

Response to Comment No.62

The video tape segment that was provided to the Center for Defense was of the free-ranging cow/calf herd. This segment was the only portion of the video tape usable as documentation of field observations. The field notes generated during the observations were utilized to draft the report. The bucking and agitation observed by some animals was also observed during the control portion of the observations and can be attributed to a number of factors, including nuisance insects.

-Incidentally, this tape was provided to the Center for Defense Information for use in their production of a program on military airspace issues. Representatives of the Air National Guard who were interviewed for the program contended that the overflights had no effects on bison herds and provided the video as proof. However, they did not provide footage of the bison which were agitated by the overflights. Or did those incidents somehow not get videotaped?

General Findings -

-There is a noted conflict between the testimonies from herd owners and managers to that of wildlife biologists. "It was the opinion of the wildlife biologists that military aircraft operations may significantly impact bison." On what was the opinion of the wildlife biologists based? Hearsay? Was this investigated further?

-Also, though the DEIS says that herd owners/managers reported no problems from overflights, in the summaries of their statements (Table J-1) it indicates that two of the five owners/managers report that overflights may "spook" the bison, but that there were, in fact, no low-level military overflights with which to compare such incidents. It seems that this is one more instance of the manipulatory use of facts: The DEIS says that no adverse reactions from military overflights have been reported, however the nature and type of the overflights are not comparable to what they might be in the San Luis and Wet Mountain Valleys. Where there are adverse reactions, these are explained away by other factors to try to make the scenarios not comparable. 63

-The fact is, no one, bison or horse or man, can become accustomed to sudden and unexpected and excessively loud noise. It doesn't take a scientific study to explain this (or explain it away). It is common sense.

Other Questions -

-Were the 300 AGL and 500 AGL flights at the highest speed and power settings that they would be during actual training, so as to present a true "worst case scenario"? The DEIS indicates a range of speeds rather than hard data. 64

-Although the information in Tables J-2 and J-3 match up, they do not match up with Attachment A, so that we do not know the SELs of each of the overflight occurrences recorded in the tables. There are certainly no SELs for occurrences 2, 3, 4, 9, 12, and possibly none for 11. The highest recorded Peak Level dB, which seems to be for occurrence 11, was one nautical mile away from the herd. It is not clear what the noise level was at the herd's location. For the other loudest noise level, which seems to be for the first occurrence, it is not clear what the location of the jets were in relation to the herd, since they flew over in "line abreast" formation and may have been a mile apart. "Directly overhead" in a "line abreast" formation may indicate that each plane was, in fact, a half a mile from the herd, while one of the jets was probably closer to the noise monitor than to the herd. In any case, none of the information indicates the actual or estimated distance of the jets from the noise monitors, of the noise monitors from the herds, or of jets (as opposed to "formations") from the herds. 65

On June 22, the overflight at 1000 AGL at 87 dBA caused major reactions in 50% of

RESPONSES TO COMMENTS

Response to Comment No.63

The phone survey was conducted simply to obtain anecdotal information from wildlife biologists that oversee large public bison herds and from ranch owners with bison herds in close proximity to military aircraft operations.

Response to Comment No.64

The airspeeds and power setting presented in the bison study were those reported from the lead aircraft to members of the ground crew during each overflight, and would be representative of air speeds and power settings of training missions associated with the Colorado Airspace Initiative.

Response to Comment No.65

As stated in Appendix J, the noise monitors were placed in stationary positions on the ranch site, while the various herds observed were mobile and often located in varying positions.

the herd, and the overflight at 500 AGL, 89 dBA, caused major reaction in 100% of the herd. *An increase of only 2 decibels caused a 100% increase in reaction.* This seems significant but no mention is made of it in the findings.

Feedlot Herd-

-June 22 overflight - Because of the circling of the jets, was there, in fact, warning noise to allow the animals to adjust to the oncoming sound?

-June 23 overflight of cow/calf herd - major reaction exhibited. To what is that reaction attributed if not to the overflight?

-June 24 - the SEL was 104dBA, and the AGL 500, but the overflight was *one nautical mile west of the herd!* In other words, it wasn't even close to the animals! Hence, no reaction from 98% of the herd.

-In fact, there are no instances of SELs exceeding 100dBA in close proximity to any of the herds observed.

Cow/calf herd -

-The June 23 overflight at 300 AGL had an SEL of 96.5 dBA, whereas the June 24 overflight at 1000 AGL had an SEL of 98.5. Louder, but higher, and less reaction from herd. Is there any explanation for this anomaly?

Yearling herd-

-A major reaction was exhibited by 100% of the herd, yet this was attributed to the presence of the ground crew. Although the conditions may have been less than ideal (it sounds as though the crew was as unprepared for the overflight as was the herd), there is no reason to conclude that the "major reaction" was not caused by the overflights. It is even a bigger stretch to conclude that "under normal circumstances" the low-level overflight would elicit only minor reactions. Also, the report says that after the overpass, "a majority of the herd resumed normal behavior." It does indicate what happened to those animals which did not resume normal behavior, nor did it indicate if a "majority" represented 51% of the herd or 99% of the herd. It seems obvious - even to the casual or detached observer - that the report is taking pains to disregard the effects of an overflight by attributing the observed behavior to other circumstances, as if to say, "It just so happened that while a F-16 was flying 500 feet overhead, the bison starting acting distressed, but it had nothing to do with the overflight." 66

-It should also be noted that Tom Redmond of Wolf Springs Ranches recently purchased over two hundred bison from Rocky Mountain Bison, Inc., the same herd used in this study. The owner of Rocky Mountain Bison, Inc., Mr. Hisa Oto, very candidly informed Mr. Redmond that during the overflights of his bison, the yearling animals were extremely agitated by the military jets. He said, "They went crazy." This contradicts the rather incredible conclusion of the crew that the overflights were not the cause of the "major reaction." 67

Overall, it appears that the most thorough and accurate reporting was of the herds not affected by the overflights (seven overflights of the cow/calf herd), and the most problematic and sketchy 68

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RESPONSES TO COMMENTS

Response to Comment No.66

Comment noted. The text of the Final EIS has been modified to state that additional observations may be necessary before any definite conclusions can be reached concerning the impacts of military aircraft overflights on yearling bison.

Response to Comment No.67

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.68

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

and questionable reporting was of the herds which demonstrated "major reactions" to the overflights (only one overflight of the yearling herd).

IX. CULTURAL RESOURCES -

It is obvious, of course, that an overflight is not going to have any impact on such things as old Indian hearths, flakes, arrowheads, historic trash scatter and groundstone fragments. Yet the DEIS goes into great detail about such cultural resources, filling up many pages with such useless information.

This is a smokescreen of data and research which attempts to show the thoroughness of the DEIS, but instead appears to be an attempt to detract attention from those issues which beg for more research and analysis and where the information is sadly wanting. We quite honestly don't need a detailed analysis of archeological fragments which have no connection whatsoever to the effects of military overflights. It gives the proponent several more opportunities to issue a finding of no significant impact in an attempt to lend credence to its more general conclusion. But it lends nothing to the overall analysis. It is a fatuous issue in light of the greater concerns about military overflights. 69

Where is the data about people who have complained about overflights in the Wet Mountain and San Luis Valleys? Why isn't that data being presented and analyzed in the DEIS instead of taking up space with inventories of rock fragments? 70

Instead of analyzing dead cultures, why not study the living cultural resources in the Region of Impact? It appears, for instance, that the spiritual retreat centers around Crestone have been completely ignored in this study. This unique area hosts retreat centers for a variety of religious faiths, ranging from Christianity to Zen Buddhism. If it will not be considered as a cultural resource, perhaps it should at least be considered as a socioeconomic resource, since it is a kind of industry, attracting pilgrims from all over the world. People come to these places for silence and meditation and prayer. Thus, the principle resource offered, or shall we say the source of the resource is silence. Destroy the silence and the resource is destroyed. Military overflights not only destroy the silence, but the very presence of military jets is contradictory, if not anathema to the precepts of religious contemplation, serenity of the spirit and renewal of the soul. It is apparent that VR-413 will directly impact the religious retreat centers around Crestone, even if the width of the MTR is reduced. It is going to be very difficult for all pilots at all times to maintain a flight pattern within such a constrictive width. But even jets flying within the reduced MTR will still create an adverse noise impact on the religious retreat centers. The DEIS makes no mention of this. 71

X. AIR QUALITY -

4.8.1.2 "MOAs with MTRs passing through them may have potential for impacts on air quality." Furthermore, in this proposal. "Several MTRs have identical segments within a given MOA, which alters the possibility of increased emissions due to a concentration of flight activity." 72

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RESPONSES TO COMMENTS

Response to Comment No.69

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.70

The ANG cares about the people that live near their training areas and how they feel about the activity associated with training. The NEPA process is providing the ANG with an opportunity to hear exactly what the public feels about its proposal before any decisions are made. Every scoping comment and every comment on the Draft EIS sent to the ANG has been read and incorporated into the administrative record for the proposal. Public comments have provided a better picture of what subjects the public wanted addressed in the document and have enabled the ANG to improve the EIS by adding or expanding to discussions in the Final EIS. Examples of added or expanded discussions include human health effects, natural quiet, environmental justice, amongst others.

Response to Comment No.71

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

RESPONSES TO COMMENTS

Response to Comment No.72

Section 4.8.1.2 is titled Methodology for Analyzing Impacts (Air Quality). This section was included to provide information on the modeling techniques used in the air quality analysis; not to draw any conclusions on impacts to air quality.

Section 4.8.1.2 states: "Thus the centerlines of common MTRs were analyzed as the location within a MOA that would have the largest concentration of aircraft. Where no MOA exists, the activity in a MTR was assumed to be the maximum of any common segments of other MTRs joining, or crossing, the MTR being analyzed." Thus the analysis does present cumulative totals for the aircraft utilizing the airspace.

Section 4.8.1.2 references a study (USAF 1992) accomplished by Oak Ridge National Laboratory that discusses these issues and the circumstances under which a potential problem could occur. The conclusion of this report is that, for most Class II and III PSD areas, military aircraft do not significantly impact air quality; however, for Class I PSD areas, the MAILS model should be used to analyze the airspace. This same report states the model has been tested with an EPA approved dispersion model. Additional information on air quality modeling can be found in Appendix W to 40 CFR 51.

Table 2-5, under Mission Profile, shows a reduction in existing and proposed sorties with a corresponding reduction in flight hours. Currently, the airspace over flown by military aircraft is in attainment for all NAAQS and, with a reduction in flight time, there is no reason to anticipate any increase in air pollutant emissions in CAI.

Yet, there is a finding of no significant impact.

The problem seems to be that each of the airspace components, including each MTR is analyzed individually. Where are the cumulative totals, especially for the segment within the LaVeta MOA where five MTRs converge? If this concentration of usage does not produce significant emissions, under what scenario would any military airspace anywhere show excessive emissions? Has it ever happened? If not, how could it be a potential problem, if it can never be shown to be an actual problem? Are the standards or the model perhaps at fault? How can 5000 sorties not produce enough emissions to create a significant amount?

XI. SOCIOECONOMIC RESOURCES -

4.9.1.2 "There is no known published information on military airspace utilization as it relates directly to socioeconomic resources." Shouldn't the ANG be responsible for sponsoring some serious research on this issue? Shouldn't the DEIS apply some more effort to researching this issue other than reviewing published literature? Why is no reference made to the two research papers which were presented to the ANG as part of the EIS process? One of these papers is by Eric Nickell and is in fact listed in the DEIS bibliography. The other is by Prof. William Weida of Colorado College. Both conclude that there is a serious detrimental economic impact to regions subjected to military overflights, yet these conclusions are not incorporated into the findings of the DEIS. The DEIS complains about the lack of literature on this subject, and yet it ignores a specific study that has been presented to the ANG. In case those papers were misplaced at Andrews Air Force Base, they will be submitted again. (See Reference No. 6). 73 74

Using the conclusion of FAA's 1985 report, *Aviation Noise Effects*, "that noise has been shown to decrease the value of property by . . . approximately 1% per decibel," do we conclude that property values under Airburst B and C will decrease by 15% since, according to the DEIS, there will be an increase in the Ldn by 15 dB in this area? Similarly, will the property values under IR-409 decrease by 10%, under VR-413 by 14%? Why doesn't the DEIS conclude this? A decrease in property value of 15% might be considered a significant impact, at least to the property owner. 75

As stated before, we want to see figures for the actual usage of the airspace for the past five years in the Region of Impact. This is vitally important because the DEIS is using the No-Action Alternative as the status quo. We maintain that overflights have been much less than the capacity allowed under current existing conditions, which is exactly why residents are so concerned about an increase in overflights, especially in regards to socioeconomic impacts. Custer County, in particular, has been one of the fastest growing counties in the nation over the past five years. Yet there is still a high level of anxiety of the ANG's plans for the airspace. For the ANG to claim that the Preferred Alternative will be better than the No-Action Alternative, in spite of the fact that there will be three new MTRs through LaVeta MOA in addition to the possibility of sorties returning to LaVeta via Airburst C, is dubious at best. We need to analyze actual numbers of sorties. If the DEIS is unwilling to analyze socioeconomic impacts, as appears to be the case, then let us do it. Give us the data. 76

The reason it appears that the DEIS is unwilling to analyze the socioeconomic impact is

Response to Comment No.73

Socioeconomic issues continue to be researched by the Department of Defense. As part of the continuing EIAP, issues like this are forwarded to USAF for their review, comment and potential action.

Response to Comment No.74

Papers received during the scoping process, such as the documents written by Mr. Eric Nickell and Mr. William Weida, have been considered during the preparation of the Draft EIS. These papers, which were not from a published source and consequently not peer reviewed, were not used to support the analysis. Such unreviewed documents from stakeholders do not carry the same credibility as the many other sources of information available to the EIS preparers.

Response to Comment No.75

In order to address concerns regarding possible devaluation of real estate, the EIS evaluated historical data for property values. This analysis compares counties within the study area for the CAI, including those areas with currently utilized military airspace, to counties outside the study area. The results indicate that all counties experienced increases in property values. Further, in terms of median property values, counties within the study area for the CAI increased 99.71 percent compared to counties outside the study area, which increased 57.74 percent. Whereas a report published by the Federal Aviation Administration concludes "that noise has been shown to decrease the value of property by only a small amount--approximately 1 percent decrease per decibel (DNL)," this analysis applies to airport/airfield environments and not land areas underlying military training airspace. Therefore, although it is not possible to absolutely conclude that counties experiencing military aircraft overflights incur any greater change in real estate values than counties not experiencing similar overflight activity, it is not likely that real estate values would drop as a result of the CAI.

Response to Comment No.76

Comment noted. See response to Comment No. 5.

that although it accurately explains the issues and concerns, it effectively sabotages any attempt to realize if those concerns might be valid. It is unwilling to do the hard analytical work of determining the source and amount of tourist dollars spent in the affected region. The general findings is basically a list of excuses for not providing good and comparable information. For instance, it says "data isolated to capture the second-home industry for the subject counties were not consistently available." How much did the EIS contractor get paid to prepare this report? Would it have been too much to ask them to spend less time counting arrowheads and more time in the Custer Country Courthouse reviewing Certificates of Real Estate Value for property sales in the County for the past five years? And perhaps even interviewing local real estate agencies as to why or why not people were buying property in the Wet Mountain Valley during the past five years, particularly second-property owners? On this very important issue, it is patently obvious that the DEIS provides little data but provides a great deal of ink and paper massaging what little data it has provided and making excuses for the data it has not provided. 77

Yet it concludes, based on the admittedly sketchy evidence offered, that "a review of the contribution of tourism related earnings to total industry earnings for each ROI is consistent with comparable figures on a state-level." But this is not even a relevant conclusion. We're not asking how tourism compares on a state-level. We want to know how much the local economies in the Region of Impact depend on tourism, and how tourism is impacted by actual overflights, by the threat of overflights, and by the disappearance of overflights. It is an unfair basis for comparison to use the No-Action Alternative as the status quo if the existing conditions have actually produced far fewer overflights than the approved capacity, or worst case scenario. Moreover, it is unfair to compare all three alternatives with each other and not with an alternative that would see the overflights reduced to none or almost none in the Wet Mountain Valley and San Luis Valley. (This would be the scenario if the Airburst Range were eliminated, or if the number of low-level flights were greatly reduced due to greater reliance on simulator training, as suggested above.) 78, 79

It is also questionable methodology, in fact it begs the question to state, "Because there are no direct impacts associated with any of the three alternatives, no projections of future conditions are presented." (4.9.1.2 p4-207) Projecting the future socioeconomic impacts would seem to be one the most important tasks for an environmental impact statement. But this DEIS shirks that responsibility. Not only is the rapid growth of Custer County within the last five years not evaluated, but this growth is not projected into the future so that it is not taken into consideration how great a population is going to be severely impacted by future overflights. 80

4.9.4.2 It is incorrect and unfair and even deceptive to say that the Preferred Alternative would be the same as the No-Action Alternative, resulting in no significant impacts in La Veta MOA. Under the Preferred Alternative, three new MTRs would cross the MOA, sorties would be able to return to the MOA via Airburst C, and the number of overflights would increase. We don't know by how much they would increase, since the DEIS has not provided this important information. 81, 82

It is striking to note the contrast between the findings of this DEIS and those of an EIS recently released by the Bureau of Land Management in Nevada about a similar matter (military overflights) in a similar area (remote, western towns adjacent to Wilderness Areas) Whereas the CAI DEIS offers obfuscation and nebulous conclusions on socio-economic issues, the Nevada 83

RESPONSES TO COMMENTS

Response to Comment No.77

The methodology used to address tourism in the study area was previously addressed in Subsection 4.9.1.2 in the EIS.

Part of the methodology for the EIS was to use existing data that was available for all counties within the CAI study area for the past 20 years (data was collected in 1993 and 1994). Instead of gathering incomplete and inconsistent data from local offices, historical data was provided by Federal and state agencies for the entire study area. This approach was used to ensure consistency in the presentation and analysis of data across county and state boundaries.

Response to Comment No.78

Socioeconomic data presented in the EIS for population, housing, and employment and the local economy are all compared to state figures. This comparison identifies any significant variances in the study area compared to the state(s) as a whole. Tourism figures, for example, did not indicate that the CAI study area (with military aircraft overflights) has a significantly higher or lower level of earnings than the rest of the state(s).

Response to Comment No.79

The role of tourism in the local economy, and its impact from the alternatives associated with the CAI, have been studied in the EIS as a part of the evaluation of socioeconomic impacts. There are a number of factors, other than aircraft operations, that may affect tourism and the use of recreational areas, including weather, the proximity of other attractions in the area, and the economy. While it is possible that a tourist visiting an area may find an aircraft overflight to be annoying, no significant change to the tourist industry would be expected considering the fact that the majority of the CAI airspace has existed for many years and the relevant influences from military aircraft operations are not changing in the study area. The contribution of tourism earnings to total industry earnings was presented in the EIS for each airspace. In all instances, these values were very consistent with overall state levels of tourism earnings as compared to industry earnings.

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RESPONSES TO COMMENTS

Response to Comment No.80

Examples of proposed actions where there is a direct link between socioeconomic resources and the environment include military base realignments and closures, aircraft conversions that involve major personnel changes, and construction activities. These actions include readily identifiable and quantifiable changes in the study area that can be compared to existing conditions. Aircraft overflights in rural settings are admittedly much more subjective and difficult to measure and existing literature is very limited. Many factors may contribute to tourism in an area.

Response to Comment No.81

The Preferred Alternative would be the same as the No-Action Alternative in terms of the counties that would experience aircraft overflights (i.e., occur within the boundaries of La Veta MOA).

Response to Comment No.82

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Response to Comment No.83

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

EIS presents clear, concise, straightforward findings, supporting a Preferred Alternative that would greatly restrict the Navy's low-altitude training over public lands:

> "Residents of the area prefer small towns or isolated ranches and homes rather than metropolitan areas. Amenities they find beneficial include the natural quiet of rural areas, lack of human intrusion and free access to remote public lands. Recreational pursuits are usually centered on outdoor activities including camping, hiking, fishing, off road vehicle travel, hunting, and hiking. . . Military combat training overflights are currently an intrusion on the backcountry, communities, homes and ranches [of this area]. These overflights disturb the peace and quiet of the area that are so important to its residents and visitors." (Central Nevada Communication Sites Proposed Plan Amendment and Environmental Assessment, March 1996. p.14)

There is one other economic issue which must be mentioned. The 140 WG at Buckley AFB is certainly an economic benefit to the city of Aurora, Colorado. While Defense dollars are poured into businesses and properties and banks in Aurora, none of those dollars find their way to the San Luis Valley and the Wet Mountain Valley, where F-16s will be cracking the quiet and flying overhead at a 100 decibels. In other words, the Region of Impact gets the noise but none of the money. While the DEIS is fuzzy on what the detrimental impacts to the local economies might be, one thing is cannot be denied: none of the economic benefit to Aurora is shared with those who live and work under the military airspace in southern Colorado. There is no economic benefit whatsoever to the Region of Impact from the Colorado Airspace Initiative. 84

XII. OTHER QUESTIONS WHICH NEED TO BE ANSWERED -

These questions were raised in the Working Committee Meetings and are noted in Appendix F, but aren't answered in the DEIS:

-What about LANTIRN training? Although the 140 WG is not equipped to conduct this type of training, some out of state units will be. It is listed as training tactic associated with the CAI (1.4.1.7) This is confirmed in the comments of LTC Buckingham from the Technical Information Group Meeting, July 13, 1993 (pF-7, Bk II). But LANTIRN training is at night, is it not? Yet, the DEIS states that the MOAs will not be used from 10 pm to 7 am. So, when is LANTIRN training going to be conducted in Colorado airspace? Has the EIS taken this into account in the analysis? 85

-To what did the 140 WG attribute noise complaints being reduced from 3 to 4 times a day to less than 1 per week? (pF-7)

-What about fuel-dumping? We were promised that this would be included in the analysis in the DEIS (F-9). I couldn't find it. 86

-We were promised answers about whether or not NOISEMAP accounts for the effects of noise in a valley, and a point paper on how the economic impacts to solitude would 87

Response to Comment No.84

The operation of the 140 WG out of Buckley Air National Guard Base in Aurora has an obvious economic impact for the immediate surrounding communities. In 1994, the payroll for the Colorado Air National Guard personnel stationed at Buckley exceeded $34 million and local expenditures, primarily contracting and purchasing, were almost $22 million. The State of Colorado collects property taxes from the men and women who work at Buckley and live in the community, and collects sales tax dollars from all purchases made within the State by ANG members. These revenue sources are a part of the general funds for the State which are distributed on a yearly basis by the General Assembly to every county in the State.

Response to Comment No.85

LANTIRN use on Airburst Range is not anticipated to occur in the near future. If this system is proposed to be used at the range, proper environmental documentation will be performed at that time.

As the 140 WG became more proficient in the F-16 aircraft after their conversion, pilots became familiar with the true capabilities of the aircraft. This allowed them to fly "smarter" and safer, thus creating less impact on the ground.

Response to Comment No.86

Fuel dumping by aircraft using the CAI airspace is not anticipated. In addition, the F-16 aircraft is not capable of dumping fuel.

Response to Comment No.87

Noise analysis calculations using MRNMAP were performed as if the ground were flat. This is a conservative approach, which tends to overpredict noise levels for the reasons given below. Additional information on the effects of topographic features has been added to Subsection 4.4 of the Final EIS.

Topographic features can sometimes increase individual noise by up to 3 dB (reflections) and can sometimes decrease noise substantially (shielding, often in excess of 20 dB). The net result is lower cumulative levels than predicted from flat ground.

Flight altitudes AGL are relative to the highest local ground elevation. By using those altitudes in the analysis, the calculations assume aircraft are at lower altitudes than they would actually fly.

be addressed (F-9). Were these questions ever answered? When and where? (On page 18, it says, "LTC Sheill stated that no Department of Defense economic studies have been, or are currently being, conducted or possible airspace impacts in Colorado." On page 29, it says, "A participant inquired about the amplitude effect of noise in a valley. Mr. Lucas [of Wyle Labs] responded that the USAF had recently examined this issue and that no further or added noise impacts were experienced." Where is this study? May we see it?)

-Although great concern and skepticism was expressed about Day-Night averaging, the DEIS proceeded to use this controversial type of noise analysis regardless of that concern. (There was also specific concern about the appropriateness of the Ldnmr penalty relating to livestock and wildlife. This was never dealt with in the DEIS.) 88

-The 140 WG wants VR-413 because "the MTR is the only route that occurs over mountainous terrain." (p.34) So?

-"F-111 aircraft may operate at 100 feet AGL." (p.35) Will this occur in the CAI? Where? When? How often?

-Regarding violations, do the "worst case scenarios" used in the DEIS include airspace violations?

-There are a couple of contradictions on p.45. LTC Shiell said that if the 140 WG is robusted to 24 Primary Authorized Aircraft, a new EIS must be prepared. However, LTC Buckingham said that if the unit is robusted to 24 aircraft then the unit will increase sorties to support the increased number of aircraft. With or without an EIS? Secondly, LTC Buckingham "noted concern regarding the establishment of 1.5 NM lateral avoidance procedures around NSAs in addition to no direct overflights of NSAs. Mr. Goforth stated that a 1.5 NM radius avoidance procedure had already been negotiated with the ANG." Well, had it? Why is no mention made of a 1.5 NM radius around Noise Sensitive Areas in the DEIS? Or a better question, are any NSAs even identified in the DEIS? Where are they? I couldn't find them. This is especially important because LTC Buckingham goes on to suggest (p.46) that the EIS be used to determine where minimum altitudes may be needed and what mitigations would be necessary. Has the DEIS done this or are all those NSAs simply swept under the rug which says "No Significant Impact."? 89

-There is expressed throughout all the meetings a general dissatisfaction with Airburst Range, Airburst MOA, but particularly with Airburst C. Nobody is satisfied with the airspace around the Airburst Range. For one reason or another, all four sides of the range have problems accommodating the ingress and egress of aircraft. There are environmental concerns from the West, aeronautical concerns from the north and east, and public opposition concerns from the south. So, naturally, the 140 WG is proposing Airburst C on the south. Public opposition seems to be the easiest to dispense with. However, everyone, including even representatives from the 140 WG, has always seen Airburst as

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Response to Comment No.88

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

only a temporary solution to military airspace needs, and that it is imperative that a new range be developed elsewhere, as soon as possible. Members of the working committee made many of their concessions on the basis that Airburst range would be eliminated in less than five years, the idea being that people could live with the military overflights for a given period of time. However, Col. Buckingham changed his story about the timetable of Airburst from 2-3 years to 5-10 years. This was a major disappointment. (Also, it should be noted that the opposition to Airburst C was, in effect, unanimous from the Working Committee. The only dissenters were representatives from Aurora, which is not in the Region of Impact, but is, incidentally, home to Buckley AFB.)

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RESPONSES TO COMMENTS

Response to Comment No.89

Noise sensitive areas identified in previous environmental documents have either been noted in FLIP (Flight Information Publication) or by procedures established by the 140 WG. Mitigations are described in Volume I, Section 2 and 4 of the EIS.

Airburst C MOA provides an added safety feature that allows military aircraft the opportunity to re-enter the Airburst Range while showing the general aviation pilot airspace more definitively on airspace maps that may have military activity. The airspace is designed to allow the general aviation pilot the opportunity to go through or over the airspace. Airburst C is part of the overall discussion of the Airburst MOA presented in Volume I, Section 2.

References

1. "An Argument Against the Expansion of Airspace for Low Altitude Training." National Airspace Coalition. September 9, 1995.

2. "Delayed cleanup, soil testing at site of ANG jet crash causes concern." *Broadcaster*. August 24, 1995.

3. "F-14 pilot apparently was showing off." *StarTribune*. April 13, 1996. p. A6.

   "Report blames geese for AWACS crash." *StarTribune*. January 12, 1996. p.A4.

   For further information on the Frequency and Cost of Bird Collisions, see Appendix I, GAO/NSIAD-89-127 Bird Hazards, which notes that over 16,000 bird collisions with military aircraft were reported between 1983 and 1987.

4. "Unfriendly Skies: The Threat of Military Overflights To National Wildlife Refuges." A Report by Defenders of Wildlife. January, 1994.

5. "Prenatal Stress Has Long-Term Effects on Behavioral Responses in Juvenile Rhesus Monkeys." A.S. Clarke et al. *Developmental Psychobiology*. 1993.

   "Long-Term Effects of Prenatal Stress on HPA Axis Activity in Juvenile Rhesus Monkeys." A.S. Clarke et al. *Developmental Psychobiology*. 1994.

6. "The Colorado Airspace Initiative and Economic Impacts on Custer, Huefano and Saguache Counties, Colorado." Eric J. Nickell, Researches for the Future. February, 1993.

   "Socioeconomic Implications of the Proposed MTR and MOA Over Flights on Custer, Huerfano, Saguache and Alamosa Counties." William J. Weida, The Colorado College. August, 1993.

These complete references are attached only to the original of this paper which is submitted to the Air National Guard Readiness Center. Other readers who wish to obtain copies of the reference materials, please contact:

Dale Ahlquist
National Airspace Coalition
P.O. Box 394
Chanhassen, MN 55317
Ph. 612-949-3301 Fax 12-949-3381

For other information regarding the Colorado Airspace Initiative or for additional copies of this report, contact:

Custer County Action Association
P.O. Box 552
Westcliffe, CO 81252
719-783-2061

The National Airspace Coalition and the Custer County Action Association are non-profit corporations organized under Section 501(c)(3) of the Federal Income Tax Code.

An Argument Against the Expansion of Airspace for Low Altitude Training

The United States Air Force, Air Force Reserve, and Air National Guard want additional airspace. They claim that they need this for six reasons all related to training. The National Airspace Coalition believes that this expansion is unnecessary for two fundamental reasons. First, the overall threat has decreased which *should* put less demand on the nation's airspace. Second, the need for low-altitude training does not reflect the reality of combat.

Air Force Assertions

In response to the National Airspace Coalition, the Air Force made six arguments for needing more air space. Briefly these arguments were:

1. "Force structure changes;"
2. "Evolving mission requirements;"
3. "The transition to more modern aircraft . . . has changed the requirements for active duty and reserve component forces;"
4. "The transition to more modern . . . tactics has changed the requirements for active duty and reserve component forces;"
5. "Low-altitude training is still required to defeat certain threats such as those recently experienced by the [Air Force] in Bosnia;" and
6. "The [Air National Guard] is now required to train, as their active duty counterparts, in more capable aircraft that perform combat missions needing larger parcels of airspace to accommodate modern weapons. . . ."
    a) (i.e. Advanced Medium Range Air-to-Air Missile (AMRAAM).
    b) "Requirement for using medium to high altitude bombing tactics as learned in Operational Desert Storm."

In the first four arguments, the Air Forces asserts that tactics, mission, aircraft, and force structure have changed. While we do not quarrel with the force structure issue, we question whether there is in fact a substantial differences in the tactics, mission, and aircraft for the U.S. Air Force today from what it was during Desert Storm. And while we will grant that there is some force structure changes, we do not believe that it follows that the Air Force will need additional air space, only that it follows that there may be changes as to who is going to use it.

The Air Force argues that "the transition to more modern aircraft . . . has changed the requirements for active duty and reserve component forces." We are not certain what this means. It appears to imply that modern aircraft have changed the altitude in which they operate. This was not the case in Desert Storm. In that war, the most modern aircraft, the F-117, flew at same medium to high altitudes that the Air Force has bombed from since World II as this exchange in a congressional hearing demonstrates.

> *Mr. McCrery*. How do you explain the fact that F-117's were used disproportionately in the opening stages of the war, disproportionately in terms of the sorties they ran, compared to the number of aircraft they represented as a percentage of the whole, and knocked out some of the elements of the Iraqi Army that allowed us to establish air superiority, and yet we didn't lose a single 117?
>
> *Mr. Sprey*. For the same reason that the other fighters that flew 10,000 feet and higher didn't get hit, either. That is not a tribute to the survivability of the airplane.
>
> It just means if you stay out of the close-in combat zone, it is not hard to survive. Every airplane in the war survived beautifully as long as they flew high. At high altitude there are no guns to reach you, and the radar missiles that can reach you are very easy to outmaneuver, with or without stealth.
>
> In general, in previous wars it has taken anywhere from 100 to 500 surface-to-air missiles to get a single kill. They are just not a big threat if you see them coming and if you fly high.
>
> So, the F-117 achieved the same thing as the F-16 or the F-15: When you flew high, you didn't hit. There is no miracle there. . . ."[1]

The argument that tactics have changed and thus, the Air Force needs more low altitude training, seems inconsistent with the distinction between the tactics of Vietnam and those employed in Desert Storm. Indeed in, Desert Storm as in Vietnam, aircraft flew in the medium to high altitude range.

> By the time Desert Storm ended, however, the coalition's loss rate was only about one fixed-wing aircraft per 1,800 combat sorties. This loss rate was 4.7 times lower than that experienced by the U.S. over North Vietnam from January-December 1967, and some

[1]U.S. Congress. House. Committee on Armed Services. *The Impact of the Persian Gulf War and the Decline of the Soviet Union on How the United States Does its Defense Business*. Hearings. 102 Cong., 1st sess. (Washington, D.C.: Government Printing Office, 1991): 582, hereinafter *Impact of the Persian Gulf War*.

> 14 time lower than that American air forces sustained during Linebacker II. Low losses stemmed from the combination of successful suppression of Iraqi air defense and the decision to bomb at medium altitudes. How were losses kept so low in Desert Storm? Although some crews initially tried NATO-type ingress tactics during the first few nights of the Desert Storm, the sheer volume and ubiquity of barrage AAA [anti-aircraft artillery], combined with the ability of Stinger-class IR SAMs [infrared heat-seeking surface-to-air missiles] to be effective up to 12-15,000 feet, quickly persuaded most everyone on the Coalition side to abandon low altitude, especially for weapons release.[2]

The F-117, the most modern aircraft in the Gulf War, and still the most modern, does not fly at low altitude. It would not be safe to fly in that region and the pilots know it. As former Under Secretary of Defense for Research and Engineering, Donald Hicks testified: "If you ask the 117 pilots how they felt, going in very stable at 20,000 feet and using their laser-guided triple LGBs, there was no question of that. They knew they were safe and they knew there was no problem at all."[3]

The Air Force's fifth and sixth arguments are more specific. They maintain that the Air Force needs to train at low altitude to handle the low-altitude threat as experienced in Bosnia; that the Air National Guard is using more "capable equipment" that needs "larger parcels of airspace to accommodate modern weapons" such as the AMRAAM, and "medium to high altitude bombing tactics as learned in Operation Desert Storm."

The argument that the Air Force learned "medium to high altitude bombing tactics" in Desert Storm is specious. The Air Force has been dropping bombs from medium to high altitude in every war it ever fought. From World War II and Korea to Vietnam and Desert Storm, the Air Force has dropped bombs from medium to high altitude for the same reason: its losses were too high from low altitude.

The Air Force argument that it needs additional airspace to accommodate modern weapons, using the AMRAAM missile as an example, is also fallacious. The AMRAAM has at most, an additional range of ten percent. More to the point, however, is the fact that at $500,000 a copy, the Air Force can not afford to train with them. Consequently, all of the training is "pre-launch," which requires no additional airspace.

The Air Force argues that it needs to train at low altitude to "defeat certain

[2]"Gulf War Air Power Survey," Johns Hopkins University. Directed by Elliot Cohen. Draft. Chapter 2 (1993): 7.

[3]*Impact of the Persian Gulf War*, 701.

threats such as those recently experienced by the [Air Force] in Bosnia." There is nothing new about the threat in Bosnia. What distinguishes Bosnia from Desert Storm is air power's inability to find the surface-to-air threat in Bosnia. While the anti-aircraft guns (AAA) in the Desert Storm stood out in strong contracts to the light colored sand, the AAA in Bosnia is virtually invisible. The only way in which to find it is to get exceeding low and close to it. Unfortunately, low flying, thin-skinning Mach 1 plus aircraft are not designed to survive in the close-in environment.

One of the aircraft cited as a candidate for low level training in the Air Force's response to the National Airspace Coalition, was the F-16.[4] But just how successful is the F-16 as an attack aircraft and how survivable is it?

> I would say not very successful. Why? For the simple reason that it was forced to fly at 8000 feet and above. . . . Th[ere] is no way to make an F-16 survivable enough to fly at 2000 feet. . . .
>
> No 500 knot fighters dared fly underneath, simply because of the guns. None of our thin-skinned jet fighters could fly in the clear weather under 4,000 feet, because of the Iraqi gun defense were too rough. At these altitudes, the AA guns tore the un-armored jets apart.
>
> In a very real sense, the gun defense, as has been the case in every previous air war, dominated the air defense situation and caused a major degradation in the effectiveness of high-speed jets."[5]

Former Secretary of the Navy John Lehman also believes that flying low is dangerous.

> You're terribly vulnerable flying low during the day, it's suicide. . . .
>
> I'll never forget, I went over to Israel right, when I was working for Kissinger, two weeks after the [1973] war. I was talking to an Israeli Mirage pilot who told me he was flying up in the Golan giving close air support and he was just cruising along at about 300 feet and up ahead he saw a Syrian officer, or Syrian soldier, just a person, lift his hand with a pistol in it as he flew over it—and then all of a sudden he watched his hydraulics go to zero and he had to jump out. The guy shot him down with a .45.[6]

[4]"F-16 aircraft at the lowest anticipated flying altitude of 500 feet above the ground and an airspeed of 480 nautical miles per hour is 100 DBA or 40 DBA lower than the nationally recognized threshold of pain. It should also be noted that this exposure would last less than 20 seconds per occurrence." (Kier to Ahlquist, (26 Sept 1994))

[5]*Impact of the Persian Gulf War*, 573, 584-585.

[6]Interview, John Lehman

Furthermore, flying low seems to be, at least to General Norman Schwarzkopf, unnecessary, particularly with today's technology. "We have such great capability in aerial-delivered munitions now, you could bomb from 10,000 feet in the air through clouds in a heavy rain at night. That is the capability that you have."[7]

General Schwarzkopf's belief is shared by former Under Secretary of Defense, Donald Hicks.

> PGMs [Precision Guided Munitions] let us bomb from higher altitudes above the AAA level, while still retaining high accuracy. This helped us accomplish our war aims with far lower loss rates. . . .
>
> Buying PGMs now allows us to get maximum mileage from our existing assets in the near term. We have seen that aircraft using PGMs performed basically as intended. . . .
>
> Our F-16s were . . . not equipped with PGMs and their performance really suffered as a result. These aircraft are smart, in the sense that they have superior guidance and control to drop dumb bombs with great accuracy. Unfortunately, they can only achieve this accuracy at fairly low altitudes in benign threat environments. Because of all the Iraqi AAA, the F-16s could not go low enough to deliver dumb ordnance as they were originally intended.[8]

It follows that if the F-16 (and other high speed, thin-skinned jets) were equipped with precision-guided munitions (PGMs), they would not have to fly low and risk getting shot down. The technology plan of the future appears to reflect the experience of the past.

The trend toward firing increasing smart weapons from safer altitudes is reflected in actual wartime experience in the last few wars and is incorporated in the future and present technology as indicated in fig. 1 below. Furthermore, a robust study done at the Center for Naval Analysis (CNA) showed that it was much less expensive to use unmanned weapons for deep strike and some battlefield interdiction.

The National Airspace Coalition will concede that the return of the air component to the U.S. from Europe has shifted the distribution among the Air Force, Reserve and the Air Guard. Furthermore, we will also agree that many of the targets shot down in the air-to-air arena were at low altitude. As a result, it would not be wise to give up training in the air-to-air arena at low altitude simply because we were able to fly at medium altitudes to shoot down these low-flying targets. To do so would be to abdicate that domain for our failure to train there. Acknowledging this, however, does not mean that additional air space is required.

[7] *Impact of the Persian Gulf War*, 931

[8] *Impact of the Persian Gulf War*, 679-681

On the contrary, the available airspace for low-altitude training is still more than sufficient to accommodate such training in light of the present or even foreseeable military threats to the U.S. Moreover, the National Airspace Coalition is troubled by the increasing evidence that the continued emphasis on low-altitude training has less to do with preparation for actual battle scenarios than with the amusement it provides for the flight crews. This characterization is not made flippantly or without substantiation. Rear Admiral Riley Mixson, former Assistant Chief of Naval Operations for Air Warfare, *the Navy's number one naval aviator*, in a recent speech on the lessons of the Persian Gulf war said:

> The third lesson is choosing the right battle space for the fight. Prior to actual combat, many missions were planned to hit heavily-defended targets at low altitudes. Thanks in large part to the Navy's Strike Project Evaluation and Anti-Air Research Team (SPEAR), that strategy changed. SPEAR's in-country briefs regarding their careful assessment of the Iraqi Air Defense System helped change planning, resulting in mission profiles being flown at high and medium altitudes. . . . That single change proved a key ingredient in minimizing losses. And, with the addition of smart all-weather munitions . . . CAS missions will also eventually migrate above the heart of the ground-based IR SAM envelope. This lesson is a foot-stomper because there will be those who will advocate going back to nap-of-the-earth flying as after Viet Nam—because it is more fun—*in peacetime*. I hope this lesson is not lost for the future. (Emphasis in the original.)

There is no reason to believe than any potential military threat encountered by U.S. air power will not have well-developed ground-fire capability. The reality our pilots will continue to face is that they will not be able to attack at low-altitudes, and their training should reflect that reality.

We believe that the maxim, "you fight like you train" is a valid one. Experience shows that when America actually goes to war it attacks ground targets from medium to high altitudes. "Crews bombed from altitudes much higher than those from which they had previously trained in order to remain above the effective altitude of the AAA and infrared (IR) surface-to-air missiles (SAMs). As a result, the aircraft lost accuracy because of the greater slant ranges to the targets and the resulting magnification of aiming errors. . . . Precision weapons did not suffer as much from changes in release altitudes."[9] This is simply another reason why the emphasis should be on training at medium and high altitudes rather than low altitudes.

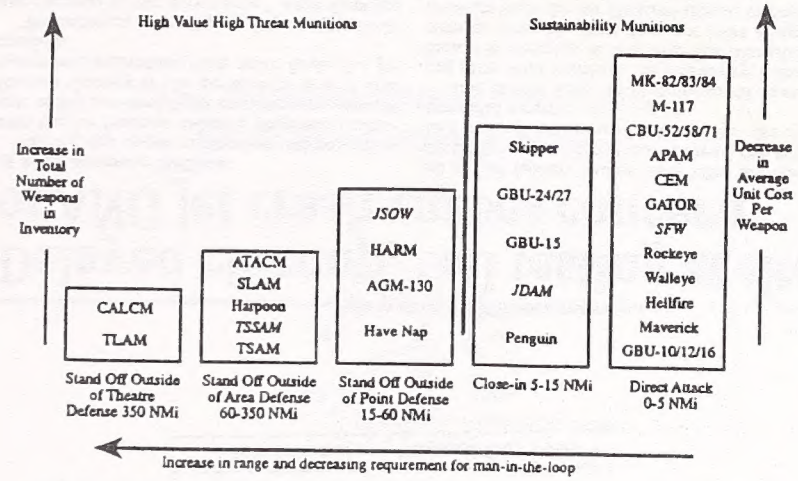
There appears to be an institutional bias toward training at low altitude in spite

[9] "Gulf War Air Power Survey," Johns Hopkins University. Directed by Elliot Cohen. Draft. Chapter 3 (1993): 34.

of the lessons of war. Nothing can improve slant range accuracy better than practice from the altitude from which the weapons will actually be dropped. The National Airspace Coalition does not believe that it is in the best interests of the United States to impact the environment because of the Air Force's unwillingness to forsake dogma for reality.

The unfortunate—and unacceptable—result of the Air Force's current tactics is that the only people exposed to the unnerving experience of low-level military fly-overs are not our enemies, but our own citizens.

Figure 1
Strike Warfare Master Plan



The Strike Warfare Master Plan shows the increasing trend for precision in air-to-surface weapons. The last country that the United States went to war against—Iraq—began with unmanned weapons. This plan reinforces that trend. Unmanned weapons do not require low altitude airspace in which to train. (Weapons not yet in the inventory are indicated by italics.)

Broadcaster, August 24, 1995 -

Delayed cleanup, soil testing at site of ANG jet crash causes concern

by Mary Bormann Hollister

Among the major environmental concerns with the Air National Guard's proposed expansion of the low-level flight corridor over parts of Vernon County is the possibility of soil and water contamination from toxic fuels if a jet crashes.

"Remediation is the top priority and immediate cleanup is the procedure," says Captain Dave Olson, information officer for the Air National Guard (ANG) at Volk Field.

In a telephone interview Tuesday afternoon Olson said that in the case of the March 31 crash of an Air National Guard F-16 at the Dane County Regional Airport, "The site was remediated and the DNR signed off on it within 72 hours."

However, cleanup at the site of an ANG F-16 crash near Strum, Wisconsin on June 25 hasn't moved quite as quickly.

According to Jack Eslien, the DNR environmental repair specialist at the district office in Eau Claire, there has been no physical remediation at the three sites affected by the June 25 crash except the removal of the debris of the plane and the two wing barrels containing jet fuel that were detached before the crash.

"I'm disgusted and you can quote me on that," Eslien said Tuesday. "I've pleaded with them to take me out to the sites and it took a month and a half to get a response.

"They won't tell me exactly where the fuel tanks were and the marsh grass is now so high you can't see anything from the ground. I've gone out with the warden and walked for two hours in the area. I've asked for a helicopter. Now Captain Mark Lampe, an ANG official from Madison, says he'll take me out, but he doesn't know if he'll have a vehicle."

The three sites Eslien is referring to include the site of the jet crash plus a hillside where one jettisoned 240 to 250-gallon wing barrel of jet fuel landed and burned, and the marsh in Borst Valley where the second 240 or more gallon barrel of fuel landed. Immediately after the crash, the ANG sent in a crew that removed the debris and covered the ground with plastic, the DNR specialist reports.

Also at that time, an environmental consulting firm from Madison, Montgomery Watson, took soil samples at the site. But almost two months later, the firm does not have a signed contract with the Air National Guard to continue work on site remediation, Eslien said.

"There hasn't been a full-range sampling for waste and the longer it takes, the harder it's going to be to remediate," he added.

"I don't think there's been ground water contamination yet. It takes time to migrate and it depends on the soil. With sandy soil, it goes faster of course, and that's pretty sandy soil. In the marsh, it's surface water. That's why I'm pushing."

What is delaying cleanup?

"Apparently it takes that long with the military. They should be more responsible. I'm disgusted," Eslien said.

Captain Olson was on vacation when the June 25 F-16 crash occurred and was not involved in this particular situation. However, he checked on the status of the cleanup when asked on Tuesday and reported that officials would be meeting with the DNR, contractors, agency officials and landowners on the matter the next day, Wednesday, August 23.

"Conflicting schedules, the weather and making sure everyone is involved," caused the delay Olson said.

"Initial testing to determine the range of the plume has already been done by the contractor. The difficulty is getting together with the landowners and all the agencies involved. Our goal is to make sure the site is cleaned up and returned to its original state," Olson said.

And what is a landowner's recourse if the cleanup is not satisfactory?

"Property owners can work through the legal system, through the DNR," Olson replied.

F-14 pilot apparently was showing off

A Navy pilot apparently was showing off for his parents when his fighter jet crashed on takeoff Jan. 29, killing him and four other people in Nashville, the Navy said. Lt. Cmdr. John Stacy Bates, 33, became disoriented after a rapid, steep takeoff from Nashville's airport into a cloudy sky, said Rear Adm. Bernard Smith, who presented the results of a 2½-month review.

STAR-TRIB 4-13-96 A6

Report blames geese for AWACS crash

A flock of geese caused the crash of an AWACS radar plane that killed 24 last year, the Air Force said in a report that faulted inaction by airfield managers and a controller. The Canada geese flew in front of the jet just as it took off and knocked out its two left engines, putting the jet in a slow left turn from which it never recovered, the investigation found. Geese had been suspected from the start. Investigators found the remains of nearly three dozen on the runway after the Sept. 22 crash.

STAR-TRIB 1-12-96 p. 4.

UNFRIENDLY SKIES

The Threat of Military Overflights To National Wildlife Refuges

A Report by Defenders of Wildlife
January 1994

Robert Dewey
Refuge Program Coordinator

Dexter Mead
Refuge Program Research Intern

Defenders of Wildlife ■ 1244 19th St., N.W. ■ Washington, D.C. 20036
(202) 659-9510

EXECUTIVE SUMMARY

Research by Defenders of Wildlife and a new report by the U.S. Fish and Wildlife Service (FWS) show that military overflights continue to disturb wildlife on at least 35 national wildlife refuges. According to major studies by the General Accounting Office (1989) and the U.S. Fish and Wildlife Service (1990), military overflights are one of the most harmful activities affecting national wildlife refuges (NWRs). While these studies were completed more than three years ago, military overflights continue to pose a serious threat to wildlife and the National Wildlife Refuge System. Since military agencies are not under any clear legal obligation to reduce the impact of their activities on wildlife, FWS refuge managers have been forced to rely on the good will of local military commanders. The responsiveness of these commanders varies widely and their actions have often failed to resolve the concerns of FWS managers. Furthermore, overflight concerns may increase as military agencies continue to request the use of additional airspace from the Federal Aviation Administration (FAA). To resolve overflight conflicts, Congress should require the Department of Defense to avoid or, at minimum, mitigate the effects of overflights on wildlife unless precluded by national security considerations.

I. OVERVIEW OF THE OVERFLIGHT PROBLEM

At Cross Creeks National Wildlife Refuge in Tennessee, a military helicopter flies at less than 500 feet through a designated no-flight zone, distressing refuge visitors and causing several thousand ducks and geese to take flight. A Navy fighter passes 200 feet over California's Farallon NWR, raising 3,000 murres, 20,000 gulls, and 5,000 cormorants. At Georgia's Harris Neck NWR, a low-flying military transport flushes 50 federally endangered wood storks from their nests.

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Recent Reports on the National Wildlife Refuge System

While events like these have been frequently documented on national wildlife refuges for more than 20 years, the issue of military overflights on refuges only began gaining national attention with the 1989 General Accounting Office (GAO) publication entitled *National Wildlife Refuges: Continuing Problems With Incompatible Uses Call for Bold Action*. This report found that 90 percent of 428 NWRs had secondary uses occurring on them and that 59 percent had at least one harmful use occurring. Military air exercises were one of the secondary uses most frequently cited as harmful. Refuge managers viewed military air exercises as harmful on 36 (65 percent) of the 55 refuges where they occurred (see Appendix I), and, of the 36 managers, 35 recommended that such air exercises should be discontinued. According to the GAO report: "Conservationists and FWS refuge staff believe that dogfights and bombing exercises, weapons testing, and training, along with frequent sonic booms over refuges adversely affect waterfowl, shorebirds, and other wildlife."[1]

[1] GAO, *National Wildlife Refuges: Continuing Problems With Incompatible Uses Call for Bold Action*, 1989, p. 30.

Following up on the 1989 GAO report, the 1990 FWS study *Secondary Uses Occurring on National Wildlife Refuges* found that military air exercises took place over 96 out of 478 refuges. Furthermore, managers on 70 (73 percent) of these refuges considered the military exercises to be harmful, making overflights the secondary use most often considered harmful (see Appendix I). The 1990 study also noted that FWS had the legal authority to control miliary overflights in only 2 of the 96 instances.

Efforts to Resolve Overflight Conflicts

Since 1990, the Fish and Wildlife Service has considered the overflight problems on a number of refuges to be resolved. Indeed, the FWS has remedied overflight concerns at several refuges where the agency had the clear legal authority to do so. At Minnesota's Rice Lake NWR, for example, a special use permit which had been issued previously to the Minnesota Air National Guard for "air drop and retrieval activities" was not renewed after 1990. The action appears to have effectively ended the military overflights of the refuge, which were conducted in conjunction with ground exercises. In another case, following significant legal and public pressure from environmental groups, Interior Secretary Bruce Babbitt in August 1993 formally withdrew a 44-year-old letter of permission allowing the Navy to bomb Washington State's Copalis NWR.[2]

In many instances, however, it appears that the FWS has not completely addressed overflight concerns. A review conducted by Defenders of Wildlife in late 1993 shows that harmful overflights are still occurring on at least some NWRs where the FWS

[2] Even though these actions represent a clear departure from the *laissez faire* attitude of past Administrations toward military uses of wildlife refuges, the Interior Department is still unwilling to press every overflight concern. Claiming it lacked legal authority, the Interior Department in 1993 failed to support efforts by the FWS manager of Arizona's Cabeza Prieta NWR to limit military training exercises. See "Effort to Protect U.S. Wildlife Refuges Turns Corner Today," *The Washington Post*, October 20, 1993.

considers the overflight problem resolved. At Utah's Fish Springs NWR, for example, a FWS database[3] indicates that "[t]he problem was essentially corrected by 9/30/91;" yet another FWS document dated September 30, 1992 states that "[t]he refuge has documented 15 unnecessary and unsafe overflights of the refuge in the last 9 months."[4]

In other cases, FWS reevaluated the overflight concern and determined that the activity was not as harmful as first believed. On several occasions, however, this determination was apparently made because refuge managers were unable to conclusively prove negative impacts on wildlife, rather than because overflights were proven to be unharmful. At North Dakota's Arrowwood NWR complex, for example, low-level flights by bombers and supersonic flights by fighters were reported to disturb colonial nesting and migratory birds in 1990. However, when the refuge manager was requested to reevaluate the problem in 1991, he reported: "The overall affect of these exercises on concentrated wildlife populations, at present, is unknown."[5] Overflights at Arrowwood NWR—and at six other refuges in FWS Region 6[6]—were then deemed "[n]o problem on reevaluation."[7]

[3] FWS database on "Current Status of Harmful and Incompatible Uses," updated on 8/4/92.

[4] FWS "Notes for Utah Test and Training Range Meeting September 30, 1992, at Partoun School."

[5] Memorandum from Refuge Manager, Arrowwood Complex, to Assistant Regional Director, dated May 21, 1991.

[6] The following states are included in FWS Region 6: Montana, North Dakota, South Dakota, Wyoming, Nebraska, Utah, Colorado, and Kansas.

[7] FWS "Current Status of Threats and Conflicts" database.

New Information on Overflights

Despite some limited success, most obviously in the rare cases in which the Fish and Wildlife Service has had clear legal authority to regulate military training exercises, a three-year effort by the federal wildlife agency has failed to resolve most overflight concerns. In many cases, refuge managers appear to have reached an impasse with the military in their efforts to resolve overflight concerns at scores of federal refuges. An August 1993 FWS report[8] shows that at least 30 refuges continue to be harmed by military overflights and another 11 refuges are affected solely by civilian overflights. In addition, Defenders of Wildlife research indicates continuing military overflight concerns involving at least 5 additional refuges not included in the FWS report (see Figure 1). Additional refuges with continuing overflight concerns are:

- Seney NWR (MI): In the FWS' "General Report on Harmful or Non-Compatible Uses" (updated January 24, 1992) the refuge manager reported that "[l]ow level jet training flights [by the Air National Guard] disturb waterfowl and bald eagles. The disturbance effects include a designated wilderness area." A military training route traverses the refuge and flights are designated to go as low as 100 feet. Since the Air National Guard intends to continue to use the route through the refuge, the FWS is currently reviewing ways of reducing disturbance at certain times. For example, in a January 24, 1992 letter to the Air National Guard, the refuge manager requested the military to alter its operations because the period in which most overflights occur (April-October) is also the primary period that bald eagles use the area. As of December 1993, however, military overflights continued to be a problem at Seney.

- Back Bay NWR (VA): The FWS' "General Report on Harmful or Non-Compatible Uses" (updated January 21, 1992) indicated that harmful military and civilian overflights were still occurring at Back Bay NWR. According to this report, "[m]ilitary activity is by far the most common" and includes overflights by F-14s, A-6s, and helicopters. The helicopters "fly at extremely

[8] FWS, *Aircraft Overflight Issues on National Wildlife Refuges*, Division of Refuges, Branch of Wildlife Management, August 1993.

low levels, often below 300' [feet]—primarily along the beach and dunes. Migratory birds are disturbed by these flights. Snow geese often flush due to aerial overflights—especially those by helicopters." The report recommended prohibiting or limiting overflights, especially over the high concentrations of birds on the barrier spit. As of November 1993, military overflights continued to be a problem at Back Bay.

MILITARY AND CIVILIAN OVERFLIGHTS	
Harris Neck (GA)	Blackbeard Island (GA)
Wassaw (GA)	Sacramento Complex (CA)
Farallon (CA)	Togiak (AK)
Edwin B. Forsythe (NJ)	Havasu (AZ)
Kenai (AK)	Bitter Lake (NM)
Back Bay (VA)	
MILITARY OVERFLIGHTS	
Charles Russell (MT)	Wichita Mountains (OK)
Cibola (CA/AZ)	Imperial (CA/AZ)
Buenos Aires (AZ)	Sequoyah (OK)
Ash Meadows (NV)	San Andres (NM)
Sevilleta (NM)	Sea Island (ME)
Petit Manan (ME)	Cross Island (ME)
Kofa (AZ)	Lower Swannee (FL)
Cross Creeks (TN)	Cedar Keys (FL)
Hart Mountain (OR)	Cabeza Prieta (AZ)
Desert (NV)	Hagerman (TX)
Salton Sea (CA)	Seney (MI)
Malheur (OR)	Banks Lake (GA)

Fig. 1. National Wildlife Refuges with Aircraft Overflight Issues

(Source: Defenders of Wildlife research and *Aircraft Overflight Issues on National Wildlife Refuges*, 1993, U.S. Fish Wildlife Service).

Note: Refuges listed based on Defenders of Wildlife research are indicated in **bold**.

- **Banks Lake NWR (GA):** An Air Force bombing range sits next to Banks Lake refuge. While the FWS and the military had a memorandum of understanding (MOU) under which military agreed to fly at more than 2000 feet above the refuge, in 1990 the refuge manager wrote that "the overflights around Banks Lake are disturbing to resident as well as migratory wildlife species. . . . Our experience in the past on Okefenokee and Banks Lake Refuges has been that the military aircraft utilizing both areas pay little attention to agreements, MOU's, charts, etc. They will invariably 'do as they please' once they are in the air." The MOU with the military expired in 1990, and, as of November 1993, military overflights continued to be a problem at Banks Lake.

- **Malheur NWR (OR):** A military training route near the refuge is designated down to ground level. Military overflights affect sandhill cranes, bald eagles, ducks, geese, and American white pelicans. FWS pilots are also concerned about their own safety while conducting aerial wildlife research. As of December 1993, military overflights continued to be a problem at Malheur.

- **Salton Sea NWR (CA):** According to the 1990 FWS report *Secondary Uses Occurring on National Wildlife Refuges*, military air exercises including "helicopters, aircraft at 500 feet" cause "major wildlife disturbance." A memorandum from the regional director dated May 20, 1991, reported that "[d]irect physical disturbance is readily observable and is believed to create additional stress in migratory waterfowl populations that are suffering from habitat loss and other factors." Although the military has expressed substantial interest in resolving overflight concerns, helicopters still occasionally fly over the refuge causing major disturbances to waterfowl.

II. WILDLIFE AND WILDERNESS CONCERNS

According to refuge manager reports in *Aircraft Overflight Issues*, military overflights can pose a direct threat to the establishing purposes of individual refuges. These purposes include providing habitat for endangered species and maintaining preserves and breeding grounds for migratory birds, waterfowl, and other species. In most cases, overflights disturb nesting or migrating raptors, waterfowl, and shorebird populations.

Overflights can also disturb mammals such as bighorn sheep, antelope, walrus, seals, and sea lions.

Endangered Species Threatened

Among the many federally endangered species at risk are wood storks at Georgia's Wassaw, Blackbeard Island, and Harris Neck NWRs, piping plovers at New Jersey's Forsythe NWR, interior least terns at New Mexico's Bitter Lake NWR, and bald eagles at several refuges including Oklahoma's Sequoyah NWR and Tennessee's Cross Creeks NWR. Federally threatened Steller sea lions are found at California's Farallon NWR and Alaska's Togiak NWR. The Buenos Aires NWR in Arizona was specifically established under the Endangered Species Act to preserve a mesquite grassland for the reintroduction of the federally endangered masked bobwhite quail, while Nevada's Ash Meadows NWR provides critical habitat for 33 federal or state listed endangered, threatened, and candidate species.

Migratory Birds and Waterfowl Threatened

As the *Aircraft Overflight Issues* report points out, a number of affected refuges are critically important to migrating birds. New Jersey's Forsythe NWR, for example, provides wintering habitat for approximately 10 percent of the Atlantic flyway's black duck population and approximately 15 percent of the Atlantic brant population. Up to two million birds spend at least part of their winter at California's Sacramento NWR complex, including over half of the pintail ducks in North America. Sequoyah NWR in Oklahoma is the main Central Flyway wintering ground for mallard ducks, New Mexico's

Bitter Lake NWR sees a large portion of the world's population of lesser sandhill cranes, and California's Farallon NWR is home to the largest continental seabird breeding colony south of Alaska.

Effects of Overflights on Wildlife

Relatively few studies have been conducted to assess the biological impacts of overflights on wildlife; however, many refuge managers note that the disruption of feeding, resting and nesting of birds can lead to their fatigue and stress and has the potential of either increasing mortality or leading to the abandonment of an area. At California's Farallon NWR and Alaska's Togiak NWR, overflights occurring during the nesting season result in the loss of hundreds of seabird eggs and chicks as startled adults knock them from their nests and leave them vulnerable to predators.[9] Refuge staff at Togiak NWR believe that "[o]ne major disturbance has the potential of severely impacting the reproductive success for the entire year."[10] At New Jersey's Forsythe NWR, the refuge manager stated that the disruption of feeding and occasional flushing of snow geese and Atlantic brant "impacts winter survival and overall condition of the population."[11] Similarly, in a January 10, 1989 letter to the Federal Aviation Administration, the supervisor of the FWS Raleigh, North Carolina, field office wrote: "The acoustical and visual impacts of low flying aircraft may result in a drain on the energy reserves of wildlife due to the reduction in feeding and resting time. . . . Breeding activities may be disrupted. . . . Wildlife may vacate a habitat entirely." In fact, at both Tennessee's Cross Creeks NWR and Oklahoma's Sequoyah NWR, refuge

[9] Ibid.

[10] Ibid.

[11] Memorandum from Forsythe Refuge Manager to New Jersey field office, no date.

staff believe that overflights led bald eagles to abandon their nests, and at New Mexico's Bitter Lake NWR, the refuge manager reported: "The endangered least tern has exhibited a pattern of seemingly dissatisfaction with its former nesting territory. Low flying, or otherwise noisy aircraft may be partly to blame."[12]

The effects of overflights on mammals are less clear. Their reactions to overflights tend to be less conspicuous than the reactions of large flocks of birds, and research on mammals has generated conflicting reports. For example, while some research has suggested that desert bighorn sheep can adapt to overflights in certain situations, other studies have shown a reduction in foraging efficiency.[13] At Sevilleta NWR in New Mexico, refuge staff believe that overflights raise stress levels in deer and antelope and that during periods of environmental stress or during the fawning season they can actually cause mortality.[14] Refuge staff at Alaska's Togiak NWR have observed hundreds of walrus, seals, and sea lions stampeding in reaction to overflights, and although there has been no documented evidence of mortality, individual animals can be trampled by such stampedes.[15]

[12] Memorandum from Bitter Lake Refuge Manager to FWS Branch of Refuges and Wildlife, Albuquerque, dated March 1, 1991.

[13] See Manci, K.M., et al. 1988. *Effects of Aircraft Noise and Sonic Booms on Domestic Animals and Wildlife: A Literature Synthesis*. USFWS. NERC-88/29, and Stockwell, C.A. and G.C. Bateman. 1991. "Conflicts in National Parks: A Case Study of Helicopters and Bighorn Sheep Time Budgets at the Grand Canyon." Biological Conservation 56: 317-328.

[14] *Aircraft Overflight Issues*.

[15] Ibid.

Impact on Wilderness

Several refuges affected by military overflights also contain federally-designated wilderness. The Kenai NWR in Alaska, for example, has 1.35 million acres of designated wilderness within its boundaries. More than half of the 5,600-acre Blackbeard Island NWR in Georgia is designated wilderness, as well as 77 percent of Arizona's Kofa NWR. There are also wilderness areas at Forsythe NWR and at Oklahoma's Wichita Mountains NWR. Congress intended "wilderness" to be a highly protective designation. However, despite the 1964 Wilderness Act's definition of wilderness as an area "untrammeled by man . . . retaining its primeval character and influence, (with) outstanding opportunities for solitude," military overflights continue to disturb wildlife and visitors to these pristine areas.

III. EXISTING MECHANISMS FOR RESOLVING OVERFLIGHT CONFLICTS

The primary legal instrument addressing military overflights of public lands is an interagency agreement between the FWS, National Park Service (NPS), Bureau of Land Management (BLM) and the Federal Aviation Administration (FAA).[16] The agreement was signed in January 1993 but is virtually identical to a previous agreement, which did little to help resolve overflight problems while it was in place from 1984 to 1989. While noting that the FAA has requested a 2,000 foot above ground level (AGL) minimum altitude for aircraft flying above refuges and other lands administered by the Department of the Interior, the agreement makes it clear that compliance is entirely voluntary.

[16] "Interagency Agreement between National Park Service, Fish and Wildlife Service, Bureau of Land Management, and Federal Aviation Administration," signed January, 15 1993. Appendix II contains a copy of the agreement.

> [The agencies] desire to act in cooperation to reduce the incidence of low-flying aircraft . . . over NPS, FWS, and BLM administered land by seeking *voluntary cooperation* [emphasis added] with the 2,000 feet [sic] AGL minimum altitude advisory.

As part of the agreement, the Federal Aviation Administration agreed to communicate National Park Service, Fish and Wildlife Service, and Bureau of Land Management concerns to pilots, to investigate instances of pilot deviations from the FAA-requested minimum altitude, and to take action to "discourage deviations." Regarding military overflights, the agreement merely requires the FAA "to assist the NPS, FWS, and BLM in communicating with the various agencies of the Department of Defense with regard to military aircraft operations over NPS, FWS, and BLM administered areas."

Since FWS lacks control over the airspace above its refuges and the Defense Department is under no legal obligation to mitigate overflight conflicts, refuge managers have relied primarily on personal negotiations with local military bases to solve their overflight problems. Of the 30 refuges reporting military overflight problems in the 1993 FWS report, at least 19 have been in contact with local military bases (Appendix III summarizes FWS efforts to resolve overflight concerns).

The good will of local military commanders is often insufficient, however. In some cases, the military has been unresponsive to FWS efforts to resolve problems. At Arizona's Buenos Aires NWR, for example, refuge staff have "made at least a dozen calls and . . . in frustration, we have discontinued the complaint process."[17] In other cases, the military has been generally cooperative. Some military bases have voluntarily agreed to restrict airspace over refuges by designating an acceptable minimum altitude of

[17] *Aircraft Overflight Issues*.

flights over refuges or designating no-fly zones. Unfortunately, these restrictions are evidently not always sufficient, or, more often, they are frequently violated.

Refuge managers have particular difficulties in dealing with violations. As the 1989 GAO *Refuge* report states: "Even when conditions are negotiated . . . the conditions are frequently violated because refuge managers have little capability to enforce them." Identification of violating aircraft and what base they are from can be difficult, and reports of violations often lead to only temporary respites. At Tennessee's Cross Creeks NWR, for example, a 1991 agreement restricts National Guard flights to above 2500 feet and totally prohibits flights from a local army base, yet "the problem persists. . . . Unless we can provide identifying aircraft numbers, they cannot enforce their own regulations. . . . The status of the situation is that there are 'no flight' and 'restricted area' regulations in effect that are basically worthless except as a documentation of 'good faith' on their part."[18]

Most of the refuges harmed by overflights are located near or below a regular military operations area or military training route. A military operations area (MOA) is a type of special use airspace (SUA), a broad category describing airspace where certain kinds of aircraft activities must be confined due of the nature of those activities or where limitations must be imposed on aircraft that are not part of the activities.[19] Only non-hazardous activities are conducted within MOAs, and they are not off-limits to civilian aircraft. Military training routes (MTRs) are not a type of special use airspace, but are non-restrictive FAA-designated aerial highways used by the military to conduct low-

[18] "Secondary Use Report Form: Military Activities," from Cross Creeks NWR, dated December 17, 1991.

[19] DOD/DOT, *Report on the Joint Review of Special Use Airspace*, Report to Congress, 1989.

altitude navigation and tactical training at speeds greater than 250 knots.[20] MTRs are the military's most prevalent use of airspace and can be designated down to the surface, up to 30 miles wide, and hundreds of miles long.

FWS documents indicate that many refuge managers would like to see the military either change MOAs and MTRs so that they avoid refuges or agree to mandatory or stricter altitude restrictions (see Appendix III). While some refuge managers believe that a 2000-foot restriction would be sufficient, others see the need for a 5000-foot restriction. Seasonal restrictions may also be suitable for some refuges. Regardless of the method of mitigation used, refuge reports in *Aircraft Overflight Issues* make it clear that agreed flight levels are only worthwhile if adhered to vigorously. A number of refuge managers say that pilots must be better educated about the restrictions, and violations must be seriously pursued by military commanders.

Congress recently supplemented the national interagency agreement on airspace with language in the Senate report accompanying the 1993 Defense Authorization Bill. The Senate report instructs the Secretary of Defense and the Secretary of Interior to establish a procedure, including a mechanism for dispute resolution, "whereby DOD and DOI can achieve their mutual goals of training and stewardship."[21] Although such a mechanism may improve communication between the FWS and DOD, like the national interagency agreement, it does not impose a formal obligation on DOD to avoid or mitigate overflight conflicts.

[20] Ibid.

[21] S. Rep. No. 112, 103rd Cong., 1 Sess., p. 127, (1993).

IV. NEW RISKS FROM ADDITIONAL MILITARY AIRSPACE DESIGNATIONS

While existing military overflights pose a problem for many refuges, proposals to use even more of the nation's airspace for military training purposes are likely to increase disturbances to some refuges and create new threats to others. In Alaska, for example, a recent major flying exercises proposal will increase supersonic operations over 20,050 square miles and expand low-level training by 33,155 square miles, including areas covering Yukon Flats NWR and Innoko NWR and Wilderness area.[22] In another expansion, a recent transfer of two fighter squadrons to Moody Air Force Base in Georgia will increase sorties in its training routes by 40 percent.[23] Three of these training routes pass over Florida's Lower Swannee and Cedar Keys NWRs, where flights less than 500 feet above ground level are already frequent. Additional military training route expansions have also been proposed for the northeast, Colorado, Idaho, Nevada, New Mexico, and Utah.

Recent government studies and private groups have been critical of the FAA's allocation of airspace to the military.[24] Two complaints are common. First, while Federal agencies must address the environmental impacts of their decisions as stipulated by the National Environmental Policy Act (NEPA), the FAA has traditionally allowed the military to be responsible for its own environmental assessments and has not been involved in substantially reviewing or evaluating the assessments. In passing the

[22] USAF, *Environmental Assessment: Major Flying Exercises in Alaska*, February 1993.

[23] Letter from FWS regarding Endangered Species Information for Moody Air Force Base Environmental Assessment, dated December 15, 1992.

[24] The Rural Alliance for Military Accountability, an advocacy group based in Carson City, Nevada, is a leading advocate for reforming the procedures governing the designation of military airspace. See especially their 1989 report *The Military Invasion of America's Skies, A Report from Skyguard*.

responsibility for NEPA compliance to the Department of Defense, the FAA has left a large amount of room for military bias to enter the assessments. In particular, as stated in *Report on the Joint Review of Special Use Airspace*, a document prepared by the Department of Defense and the Department of Transportation, "[a] common concern . . . was that DOD did not adequately consider environmental issues when it sought to establish SUA [special use airspace], and it did not reassess those issues when new operations or equipment were introduced into existing SUA."[25] After this report, FAA and DOD signed a Memorandum of Understanding regarding NEPA compliance in connection with designation and modification of SUA. Unfortunately, this document apparently gave FAA no new substantive duties and even went so far as to state that FAA will accept DOD's determination that certain actions relating to the designation of SUA are categorically excluded from environmental review "without regard to whether the proposed action would be subject to a categorical exclusion under FAA regulations."

A second common complaint is that the FAA has not been effectively managing special use airspace to ensure that it is efficiently or appropriately used. According to a 1988 GAO report, *Airspace Use: FAA Needs to Improve Its Management of Special Use Airspace*, the FAA does not have adequate utilization data for special use airspace nor has it established guidelines to help eliminate special use airspace that is inefficiently or inappropriately used. The FAA has taken some steps to address these shortcomings by requiring data on military use of SUA and establishing standards to measure the effectiveness of SUA use. Despite these efforts, there is no sunset provision for SUA designations and, in as many as 25 cases, SUA designations will apparently continue despite the fact the military bases they were originally established in conjunction with are

[25] DOD/DOT *Report on the Joint Review of Special Use Airspace*, 1989, p. 13.

being closed.[26] Moreover, because military training routes (MTRs) are not a type of SUA, they are unaffected by FAAs closer examination of SUA designation.

V. FINDINGS AND RECOMMENDATIONS

There is a clear need for Congress to establish a formal and legally binding process for minimizing conflicts between military overflights and national wildlife refuges. Military overflights continue to harass wildlife and undermine conservation efforts on scores of refuges in the National Wildlife Refuge System. Refuge managers spend valuable time and limited resources dealing with local military bases. Despite its role as the federal agency primarily responsible for regulating air traffic over the nation's skies, the FAA has not exercised vigorous oversight on the military's use of airspace over national wildlife refuges. (In fact, civilian aircraft also pose a threat to a number of refuges.) Communications with the military, flight restriction agreements, and enforcement of agreements depend heavily upon the good will of local military commanders, which varies widely from base to base. Although FWS has attempted to enlist the help of the FAA in resolving specific issues identified in a recent FWS report,[27] FAA's willingness to press these concerns with the military is questionable. Moreover, conflicts between the military and refuge managers are likely to increase as the military expands its use of airspace in Alaska and elsewhere. Judging from past history, these expansion proposals many not receive careful or effective scrutiny by the FAA.

[26] Personal communication with Grace Bukowski, Rural Alliance for Military Accountability, January 1994.

[27] On November 10, 1993, FWS Deputy Director Richard Smith wrote to FAA Administrator David Hinson to state that a copy of *Aircraft Overflight Issues on National Wildlife Refuges* would soon be sent to FAA and to request that the agency develop "a resolution schedule for the problems."

Legislation reported out of the U.S. House of Representatives Committee on Interior and Insular Affairs in 1992 and re-introduced by Congressman Bruce Vento (D-MN) in 1993 would help improve the accountability of agencies of the Department of Defense, particularly with respect to the designation of additional airspace for training purposes. H.R. 2080 would require DOD to solicit and consider the views of the Secretary of Interior or the Secretary of Agriculture before establishing airspace over non-military public lands. The Governors of affected states, affected Indian tribes and other members of the public must also be given the opportunity to comment on the proposed establishment of military flight zones. If the airspace is more than 5000 acres, the legislation would require that Congress be notified. Furthermore, the bill would give the Secretaries of Interior and Agriculture the right to monitor the effects of overflights and actively seek the assistance of the Secretary of Defense and others to resolve any concerns related to overflights.

A more direct and effective means of reducing current conflicts between overflights and national wildlife refuges would be to require DOD agencies to avoid or, at minimum, mitigate the effects of their activities on federal refuges. Congress could give the Department of the Interior lead responsibility for identifying refuge conflicts and, in conjunction with DOD, identifying measures necessary to avoid or mitigate the impact of overflights on refuges. Most important, the Department of Defense should be required to implement those measures. Such a requirement would, for the first time, formally hold DOD accountable and assure that the agency makes a serious and diligent effort to reduce the impact of its activities on some of the nation's most important wildlife habitats. To avoid any potential conflicts between required mitigation measures and a compelling national security consideration, the President could be given broad discretion to grant a case-by-case basis exemption. The exemption would relieve any Defense Department agency from implementing a mitigation measure if the measure was found

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in direct conflict with national security objectives. In view of the military's poor record of adequately resolving overflight concerns, such a regulatory scheme appears to be a vitally needed means of reasonably reconciling two important national priorities: protecting federal wildlife refuges and assuring military preparedness. Moreover, Congress could easily establish such a regulatory mechanism as an amendment to legislation currently pending in Congress to improve the management of the National Wildlife Refuge System.[28] If enacted with such an amendment, this legislation would be the first time Congress has addressed the impacts of military overflights on public lands through national legislation.

Pending legislative initiatives give Congress important opportunities to craft an effective solution to the problem of military overflights of national wildlife refuges. Given Congress' heightened interest in affording greater protection to the National Wildlife Refuge System, the necessity of remedying one of the most substantial threats to that system should not be overlooked.

[28] In 1993, Senator Bob Graham (D-FL) and Rep. Sam Gibbons (D-FL) introduced S. 823 and H.R. 833, companion bills entitled the National Wildlife Refuge System Management and Policy Act.

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Wildlife Service, 1990, p. 26.

Table 9

Frequency of A Use Being Considered Harmful (42 Uses Considered)

Use	Number of Times Reported	Considered Harmful Number	Considered Harmful Percent
Military Air Exercises	96	70	73
Gas/Oil Extraction	42	30	71
Airboats	20	13	65
Off-Road Vehicles	35	18	51
Water Skiing	37	19	51
Gas/Oil Exploration	64	29	45
Mining	29	12	41
Grazing	183	76	41
Beach Use/Swimming	90	27	30
Haying	145	39	27
Rights-of-Way	304	76	25
Farming	171	36	21
Commercial Fishing	71	15	21
Mineral Exploration	5	1	20
Rental of Facilities (i.e., cabins)	15	3	20
Boating (Motorized)	188	34	18
Waterfowl Hunting	202	32	16
Recreational Fishing	286	34	13
Camping	101	11	11
Military Ground Exercises	29	3	10
Field Trials	35	3	8
Small Game Hunting	159	11	7
Boating (Non-motorized)	213	13	6
Picnicking	150	8	5
Wildlife Observation	403	15	4
Wildlife Tour Routes (Motorized)	106	4	4
Wildlife Trails (Non-motorized)	180	5	3
Walking/Hiking	329	10	3
Commercial Trapping	81	3	3
Photography	392	13	3
Timber Harvesting	66	2	3
Upland GameBird Hunting	174	5	3

SOURCE: Continuing Problems With Incompatible Uses Call for Bold Action, U.S. General Accounting Office, 1989, p.20

Use	Number of refuges where use occurs	Viewed as harmful by refuge manager* Number	Viewed as harmful by refuge manager* Percent
Mining	26	22	85
Off-road vehicles	37	28	76
Airboats	36	25	69
Military air exercises	55	36	65
Waterskiing	53	31	58
Large power boats	114	59	52
Rights of way	211	101	48
Beach use/swimming	96	39	41
Small power boats	148	60	41
Grazing	151	55	36
Military ground exercises	29	10	34
Commercial fishing	76	26	34
Hunting dog field trials	56	18	32
Camping	83	22	27
Waterfowl hunting	163	41	25
Haying	132	30	23
Picnicking	192	38	20
Farming	150	26	17
Horseback riding	115	20	17
Logging	79	13	16
Recreational fishing	244	38	16
Nonmotorized boats	193	26	13
Small game hunting	162	18	11

*Specific uses that were viewed as harmful by 10 percent or less of refuge managers are not listed in this table

Interagency Agreement
between
National Park Service,
Fish and Wildlife Service,
Bureau of Land Management,
and Federal Aviation Administration

This interagency agreement is among and between the National Park Service of the Department of the Interior (NPS), the Fish and Wildlife Service of the Department of the Interior (FWS), the Bureau of Land Management of the Department of the Interior (BLM), and the Federal Aviation Administration of the Department of Transportation (FAA).

WHEREAS, it is the purpose of the NPS to administer Federal parks, monuments, and reservations, to conserve the scenery, the natural and historic objects, and the wildlife therein, and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations as provided for in the Act of August 25, 1916 (16 U.S.C. Section 1 et seq.)

WHEREAS, it is the purpose of the FWS to operate and maintain certain Federal lands for the betterment of fish and wildlife resources, and for fish and wildlife research and fish culture, as provided for in the National Wildlife Refuge System Administration Act (16 U.S.C. Section 661 et seq.), and the Fish and Wildlife Act of 1956 (16 U.S.C. Section 742a et seq.).

WHEREAS, it is the purpose of the BLM to administer designated wilderness areas for the permanent good of the whole people, and for other purposes, as part of the National Wilderness Preservation System, as provided for in the Wilderness Act of September 3, 1964 (16 U.S.C. Section 1121, 1131-1136), and the Federal Land Policy and Management Act of 1976 (43 U.S.C. Section 1701).

WHEREAS, it is the function of the FAA to manage the safe and efficient use of the navigable airspace of the United States, as provided for in the Federal Aviation Act of 1958 (49 U.S.C. app. Section 1301 et seq.)

WHEREAS, the NPS, FWS, and BLM manage lands for the purposes of wilderness preservation, protecting natural, cultural, and wildlife resources, and for promotion of the public enjoyment and use of these resources.

WHEREAS, the FAA, recognizing the values for which NPS, FWS and BLM lands are managed, has established 2,000 feet above ground level (AGL) as the requested minimum altitude for aircraft flying in airspace over lands administered by the NPS, FWS and BLM.

WHEREAS, the auditory and visual intrusion of aircraft flying at low altitudes is the source of public complaint in certain areas administered by the NPS, FWS, and BLM.

WHEREAS, aircraft flying at low altitudes may pose a potential hazard to wildlife in certain areas administered by the NPS, FWS, and BLM.

WHEREAS, aircraft flying at low altitudes over large concentrations of migratory birds may pose a potential safety hazard to pilots and passengers in certain areas administered by the NPS, FWS, and BLM.

WHEREAS, the FAA, NPS, FWS, AND BLM, while recognizing the public freedom of transit of the navigable airspace, desire to act in cooperation to reduce the incidence of low-flying aircraft, including fixed-wing aircraft, helicopters, ultralight vehicles, balloons, and gliders over NPS, FWS, and BLM administered land by seeking voluntary cooperation with the 2,000 feet AGL minimum altitude advisory.

NOW THEREFORE:

I. The NPS, FWS, and BLM agree:

A. To identify specific field units where low-flying aircraft may constitute an adverse impact on resources and to convey specific information to the FAA for appropriate action as described in this agreement.

B. To develop and implement a standardized reporting system acceptable to the FAA to document instances of low-flying aircraft over NPS, FWS, or BLM administered lands. This reporting system will provide for transmittal of such documentation in a timely manner to the appropriate FAA Flight Standards District Office.

C. To develop training programs and instructional materials for NPS, FWS, and BLM field personnel to enable them to recognize and report instances of low-flying aircraft in a competent and professional manner. The appropriate training programs of the NPS, FWS, and BLM will expand to incorporate this subject matter into in-service training requirements. All agencies will seek the assistance of FAA to help develop training curriculums.

D. To make personnel available from the respective agencies to meet with the FAA and affected pilots to discuss resources management objectives and issues associated with low-flying aircraft quarterly.

II. The FAA agrees:

A. To communicate to pilots the concerns and objectives of the NPS, FWS, and BLM about low-flying aircraft in specified areas, using advisories, bulletins, the FAA publication FAA Aviation News, the ongoing "Accident Prevention Program" for routine pilots contact, and other means of communication with pilots. To impress upon pilots that pilot participation is strongly encouraged to ensure protection of resources and the enjoyment of natural areas by the public.

B. To investigate instances of pilot deviations from the FAA-requested minimum altitude over areas administered by the NPS, FWS, and BLM and take action to discourage deviations with the objective of reducing or eliminating such incidents in these areas.

C. To assist the NPS, FWS, and BLM in communicating with the various agencies of the Department of Defense with regard to military aircraft operations over NPS, FWS, and BLM administered areas.

D. To make available to the NPS, FWS, and BLM, at the FAA Flight Standard District Offices, the status and results of the FAA's investigation of instances reported by the NPS, FWS, and BLM.

E. To enlist the support of all aviation groups and organizations by requesting they disseminate information about problems associated with aircraft operating at low altitudes over areas administered by the NPS, FWS, and BLM.

F. To assist NPS, FWS, and BLM personnel in combating problems associated with low-flying aircraft by participating in appropriate meetings at field and regional levels.

III. The FAA, NPS, FWS, and BLM agree jointly:

A. To assess severe situations where impacts of aircraft operations upon human, cultural, or natural resources are sufficiently serious to warrant consideration of site-specific action by the FAA to minimize or eliminate the causes of such problems.

B. To prepare public informational materials, including printed matter and audio visual programs, for communication to pilots using existing FAA pilot-contact meetings and programs, aviation periodicals, and other means of generating pilot understanding of NPS, FWS, and BLM resource management objectives. Where appropriate, the FAA, NPS, FWS, and BLM will share information on techniques of conducting scientific studies and data collection to facilitate understanding of the impact of aircraft operations on affected resources.

C. All the parties will work to define procedures for use at National Headquarters and field office levels to address overflight issues over public lands area.

IV. For the purposes of facilitating communications in implementing this agreement, each party has identified the following key contact officials:

FAA
Harold W. Becker
Manager, Airspace-Rules and
Aeronautical Information Division, ATP-200
(202) 267-3731

NPS
Wesley Henry
Visitor Services Division
Branch of Ranger Activities
(202) 208-4874

FWS
David L. Olsen
Assistant Director
Refuges and Wildlife
(202) 208-5333

BLM
Keith Corrigall
Wilderness Branch
(202) 208-6064

V. If any of the parties determines that it is necessary to modify this MOU, the other parties shall be notified in writing of the specific change(s) desired, with proposed language and the reason(s) therefore. The proposed changes shall become effective upon agreement of all parties.

VI. This MOU shall become effective on the last signature date below and shall remain in effect until December 31, 1999, or unless otherwise rescinded by all signatory parties.

VII. Any party to this agreement may terminate involvement in the agreement by providing 60 days written notice to the other parties.

Director, National Park Service — 12/21/92 Date

Director, Fish and Wildlife Service — NOV 18 1992 Date

Director, Bureau of Land Management — 12/10/92 Date

Acting Deputy Administrator, Federal Aviation Administration — 1/15/93 Date

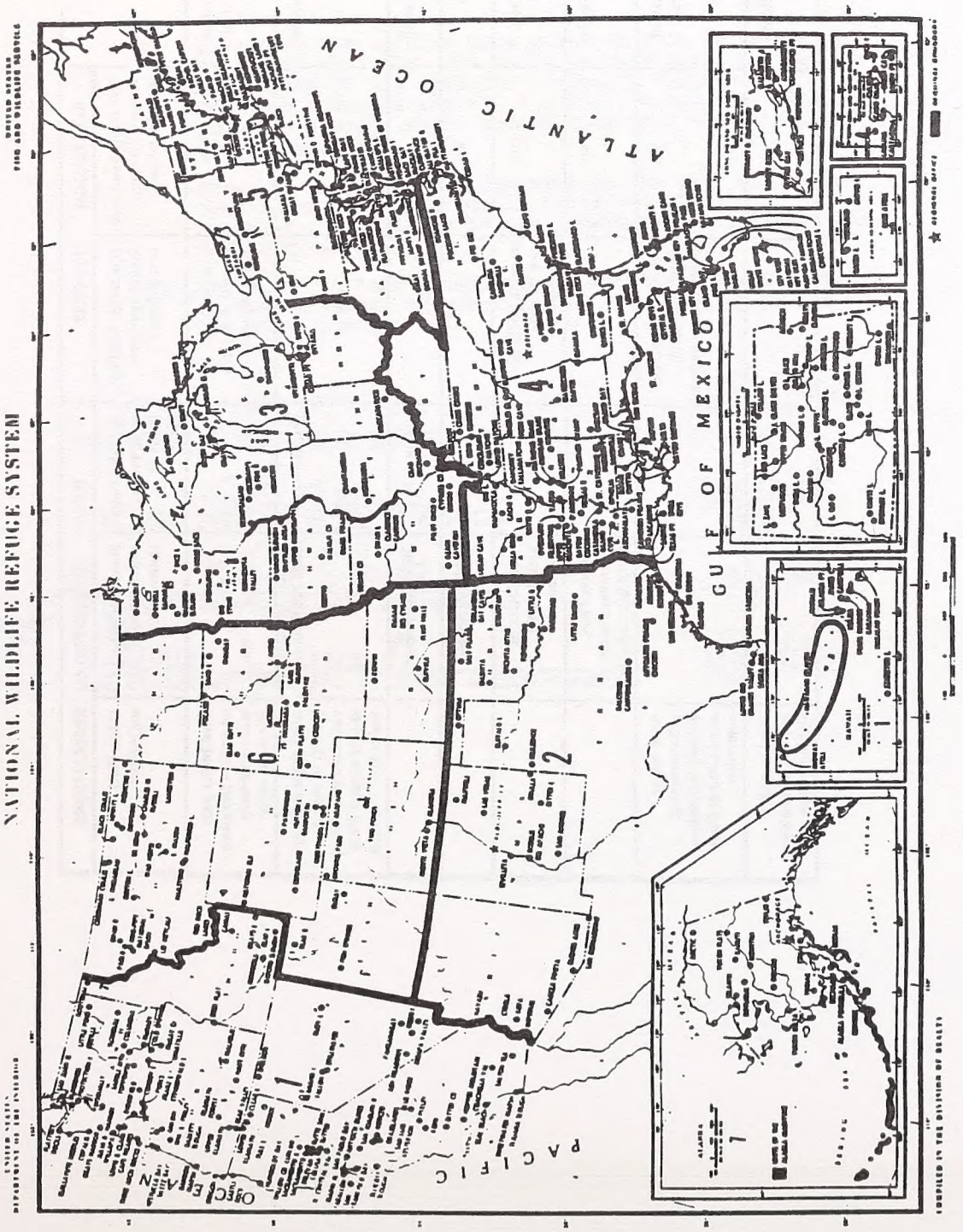
APPENDIX III: ATTEMPTS TO LOCALLY RESOLVE MILITARY OVERFLIGHT PROBLEMS ON NATIONAL WILDLIFE REFUGES

(Source: *Aircraft Overflight Issues on National Wildlife Refuges.*)

REFUGE	IMPACTS	RESOLUTION EFFORTS		FWS SUGGESTED RESOLUTIONS		
		Has refuge been able to open dialogue with the military?	Has refuge reached a formal agreement with military?	Should military move current MOA or MTR?	Should there be stricter altitude restrictions?	Other FWS suggestions
C.M. Russell (MT)	FWS pilot safety	n/a (military not contacted)		yes, or —>	raise floor of MOA to 1000'	need single military contact to report violations to
Wichita Mts. (OK)	waterfowl harassed	yes		yes		need better pilot education; more wildlife research
Cibola, Imperial (AZ/CA)	waterfowl disturbed, FWS pilot safety	yes			2000' restriction	
Harris Neck, Blackbeard Is., Wassaw (GA)	wood storks, colonial nesting birds and wintering waterfowl disturbed	no		yes, or —>	mandatory 2000' restriction	
Buenos Aires (AZ)	military-caused wildfires threaten endangered species	no		yes	5000' restriction	eliminate use of flares; need single military contact to report violations to
Sequoyah (OK)	geese and bald eagles disturbed	yes	refuge designated no fly zone			need better pilot education
Sacramento (CA)	geese disturbed	yes				need better pilot education
Farallon (CA)	seabirds and marine mammals disturbed	yes			2000' restriction is adequate, but currently cannot be enforced	need better pilot education

REFUGE	IMPACTS	RESOLUTION EFFORTS		FWS SUGGESTED RESOLUTIONS		
		Has refuge been able to open dialogue with the military?	Has refuge reached a formal agreement with military?	Should military move current MOA or MTR?	Should there be stricter altitude restrictions?	Other FWS suggestions
Togiak (AK)	seabirds and marine mammals disturbed	yes	seasonal 2000' restriction in place along one area			need better pilot education; designate more seasonally restricted areas
Forsythe (NJ)	migratory shorebirds disturbed	no		yes, or —>	5000' restriction	need single military contact to report violations to; military should consult FWS under Sec. 7 of ESA
Ash Meadows (NV)	waterfowl disturbed	no		yes, or —>	2000' restriction	
Havasu (AZ/CA)	migratory birds disturbed	n/a			2000' restriction	
San Andres (NM)	may impact desert bighorn sheep	yes	current MOU does not mention overflights		want MOU to include 5000' restriction	
Sevilleta (NM)	may impact bighorn sheep	n/a			current FAA recommendation of 2000' is acceptable	
Cross Creeks (TN)	migrating waterfowl and bald eagles disturbed	yes	Air Nat'l Guard has 2500' restriction; Army has no fly zone			need better enforcement of existing restrictions; need Cabinet level resolution
Seal Is., Petit Manan, Cross Is. (ME)	may impact colonial nesting birds	n/a				need to notify military of sensitive nesting season

REFUGE	IMPACTS	RESOLUTION EFFORTS		FWS SUGGESTED RESOLUTIONS		
		Has refuge been able to open dialogue with the military?	Has refuge reached a formal agreement with military?	Should military move current MOA or MTR?	Should there be stricter altitude restrictions?	Other FWS suggestions
Bitter Lake (NM)	Geese, ducks, cranes, least terns disturbed	yes	FWS review of EAs for major military activities have led to some restrictions; daily routine flights are still a problem			step up efforts to meet with military; need more research on overflights
Kofa (AZ)	may impact desert bighorn sheep	yes	there is currently a 1500' MOA over the refuge			need better pilot education and better enforcement
Lower Swannee, Cedar Keys (FL)	may impact migratory birds and bald eagles	unknown (regional office has expressed concern for endangered species in their review of a recent military EA)				keep low level flights to minimum and avoid eagle nests
Hart Mt. (OR)	may impact bighorn sheep and raptors	yes				increase monitoring of pilot violations
Kenai (AK)	may impact wildlife	n/a			possibly	must increase compliance of 2000' restriction
Cabeza Prieta (AZ)	may impact wildlife	yes	MOU allows flights of 1500'		MOU should be raised to 2000'	military must seriously investigate pilot violations
Desert (AZ)	may impact desert bighorn sheep	no	MOU gives military use of 52% of refuge	withdraw "Alamo" flight corridor	impose strict 2000' limit on lands outside those in MOU	



Prenatal Stress Has Long-Term Effects on Behavioral Responses to Stress in Juvenile Rhesus Monkeys

A. S. CLARKE
Wisconsin Psychiatric Institute
Harlow Primate Laboratory and Wisconsin Regional Primate Research Center
University of Wisconsin
Madison, Wisconsin

M. L. SCHNEIDER
Department of Kinesiology and
Harlow Primate Laboratory
University of Wisconsin
Madison, Wisconsin

The effect of maternal psychological disturbance during pregnancy on postnatal responses of the offspring to stressful events was investigated in juvenile rhesus monkeys. Six pregnant monkeys were repeatedly removed from their home cages and briefly exposed to unpredictable noise during mid to late gestation (Days 90–145 postconception). Six undisturbed pregnant mothers served as controls. Behavioral data were later collected from the 18-month-old offspring under a baseline and four progressively stressful conditions. Social behaviors were considerably more affected by prenatal treatment than nonsocial behaviors. Prenatally stressed offspring showed more abnormal social behavior (mutual clinging) and less normal social behavior (proximity, contact) than controls. These results suggest that offspring of mothers stressed during pregnancy may show enhanced responsivity to stressors later in life, and concur with rodent findings indicating that prenatal stress may have long-term effects on behavioral reactivity. © 1993 John Wiley & Sons, Inc.

Introduction

There is considerable evidence that physiological or psychological stress experienced by pregnant mammalian mothers during gestation may have deleterious

Reprint requests should be sent to Dr. A. S. Clarke, Harlow Primate Laboratory, University of Wisconsin, 22 N. Charter Street, Madison, WI 53711, U.S.A.

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effects on prenatal and/or postnatal development of the offspring. In humans, stressful life events experienced during pregnancy have been linked to lowered birth weights, developmental delays, cognitive impairments, and altered emotionality in children of stressed mothers (Field, Sandberg, Quetel, Garcia, & Rosario, 1985; Lederman, Lederman, Work, & McCann, 1981; Minde, Webb, & Sykes, 1968; Meijer, 1985), although many studies have suffered from inherent confounds and other methodological difficulties (Copans, 1974; Istvan, 1986). However, a large rodent literature has accumulated that has documented a variety of postnatal behavioral and physiological effects as a result of experimentally induced stress to the mother during gestation (see Jolle, 1978; Weinstock, Fride, & Hertzberg, 1988, for reviews).

Evidence from rodent studies suggests that prenatal stress exposure may adversely affect later postnatal behavioral and physiological responses to stressful events. Several studies have indicated that regulation of the hypothalamic-pituitary-adrenal (HPA) axis may be altered in the offspring of prenatally stressed rodents (Fride, Dan, Feldon, Halevy, & Weinstock, 1986; Takahashi, Kalin, Barksdale, & Vanden Burgt, 1988). Greater increases in plasma ACTH and/or corticosteroid levels following a stressful event have commonly been reported for prenatally stressed offspring as compared to controls (Ader & Plaut, 1968; Fride et al., 1986; Fride & Weinstock, 1988; Peters, 1982; Takahashi et al., 1988; Takahashi & Kalin, 1991) although not all results are consistent (Takahashi, Haglin, & Kalin, 1992). Prenatal stress has also been found to produce changes in brain opiate (Insel, Kinsley, Mann, & Bridges, 1990) and aminergic systems (Fride & Weinstock, 1988; Moyer, Herrenkohl, & Jacobowitz, 1978; Peters, 1982, 1990).

In concordance with these findings, a number of investigations have also reported enhanced behavioral responses to stress in prenatally stressed rodents (Fride et al., 1986; Fride & Weinstock, 1988). The behavioral differences are generally characterized as an increased frequency of disturbance and defensive behavior and/or heightened emotionality in prenatally stressed animals under postnatal testing conditions (Ader & Plaut, 1968; Grimm & Freider, 1987; Fride & Weinstock, 1988; Fride et al., 1986; Takahashi, Baker, & Kalin, 1990). Further, increased behavioral responsivity may be accompanied by a reduced propensity for normal social behavior such as play (Takahashi et al., 1990).

There have been fewer studies of prenatal stress effects on offspring in nonhuman primate models. Sackett (1990, 1991) found that frequent capture stress during midgestation was associated with increased fetal loss in pigtail monkeys. Tests of surviving offspring showed that prenatally stressed infants exhibited deficits in perseverative behavior (Sackett, 1991), as well as morphological changes (dermatoglyphic asymmetry) suggestive of altered fetal development (Newell-Morris, Fahrenbruch, & Sackett, 1989). While the underlying mechanism for these effects is not known, prenatal stress has been associated with transient fetal asphyxia (Morishima, Pederson, & Finster, 1978; Myers, 1975), and altered uterine contractibility (Nathanielsz, Jansen, Yu, & Cabalum, 1984) in the rhesus monkey.

More recent results from our laboratory showed that offspring of rhesus monkey mothers exposed to repeated unpredictable stress during mid- to late gestation exhibited lower birth weights, impaired neuromotor development, attentional deficits (Schneider, 1992b), delays in acquisition of Piagetian object permanence (Schneider, 1992a), and more disturbance behavior and less exploration under

stressful conditions (Schneider, 1992c) as compared to controls. Similar attentional and neuromotor effects were found in offspring of pregnant squirrel monkeys exposed to chronic social stress (Schneider & Coe, 1993), and also in offspring of rhesus monkey mothers administered ACTH during midgestation (Schneider, Coe, & Lubach, 1992).

Most studies of the effects of prenatal stress on postnatal biological and behavioral development have been limited to the infancy period. In order to test the hypothesis that prenatally stressed primate infants might also show enhanced vulnerability to stress later in life, we examined behavioral responses of prenatally stressed and control rhesus monkeys under baseline and challenge conditions when the animals were juveniles.

Methods

Subjects

The subjects were 11 juvenile rhesus monkeys (*Macaca mulatta*). Six (4 female, 2 male) were derived from mothers exposed to chronic unpredictable psychological disturbance during pregnancy (experimental group), and 5 (2 female, 3 male) were derived from mothers undisturbed during pregnancy (control group). Group sizes were originally equal, however one control subject died of illness prior to this study.

On the 2nd day of life, all infants were separated from their mothers and placed in a nursery facility. The infants were reared under standard nursery conditions for the 1st month postpartum (Ruppenthal, 1979). During this time, infants were socialized daily and each cage was enriched with toys, a moving surrogate, and a climbing apparatus (Schneider & Suomi, 1992). The infants also experienced frequent handling for measurement of body weight and collection of neurobehavioral and physiological data. At 1 month of age they were formed into peer groups of 3 monkeys each. Throughout the 1st year of life the monkeys also experienced frequent weighing and a number of noninvasive cognitive and social assessment procedures and behavioral observations (see Schneider, 1992a, 1992b, 1992c), and were trained to voluntarily enter a portable transport cage. They thus had considerable prior experience with human observation and handling.

At the time of the reported study the monkeys ranged in age from 17.5 to 19 months (mean = 18.5). During the study they remained caged in their original peer groups in multianimal rooms. They were maintained under controlled temperature (21°C) and lighting (16 : 8/hr/light/dark) conditions, were fed commercial monkey biscuits and fruit daily, and had water available ad libitum.

Maternal Stress Treatment

The infants were derived from healthy laboratory-reared multiparous females that had been randomly assigned to either control (C) or stress (S) treatment groups. Experimental (stress) treatment consisted of repeated exposure to a mild stressor during mid- to late gestation (Day 90 through Day 145 postconception). Stress treatment was administered five times per week (weekdays) at 1600 hr. The stress protocol involved transferring the pregnant female from her home cage to a smaller cage in an adjacent darkened room, and randomly administering three 1-s noise bursts over a 10-min period. The noise bursts were generated by an alarm horn that produced a 115-db, 1300-Hz sound from a distance of 1 m (Schneider, 1992). This protocol was found to significantly elevate plasma cortisol levels of stressed mothers (Schneider, unpublished data). Control mothers were housed under identical conditions but remained undisturbed except for infrequent blood sampling. There were no significant differences in age, weight, or parity between maternal treatment groups.

Offspring Testing Procedures

When the subjects were approximately 18 months of age, they were exposed to five conditions: (a) Baseline (undisturbed in the home cage), (b) Move only—The peer group was removed from the home cage via transport cage and placed in a cage of similar size in a nearby room, (c) Move/Noise—The peer group was moved as above and exposed to the identical noise stressor used in the maternal stress treatment protocol, (d) Separation—The peer group was moved and subjects were placed in individual cages, (e) Separation/Noise—The peer group was moved and subjects were placed in individual cages and exposed to the noise stressor. Each condition lasted 5 days. Within each condition, the monkeys were tested once daily for 10 min per day for 5 consecutive days, Monday-Friday, for a total of 50 min of testing in each condition. Procedures were identical for all five test sessions within a condition. One peer group was tested per day. All groups experienced the baseline condition first, but were exposed to the stress conditions in random order. No observer was present during the test sessions, instead, all test sessions were videotaped for later behavioral data collection. In the baseline condition, videotapes were made of the undisturbed subjects in their home cages. In the experimental (stress) conditions (2-5), the groups were videotaped for 10 min after placement in the experimental cages and then returned to the home cage. Three videocameras were used to record the 3 members of a peer group while in adjacent cages in the separated conditions; one camera was used to record the group during nonseparated conditions. All testing occurred between 1400-1430 hr.

All behavioral data were collected from the videotapes by a single observer blind to the maternal treatment condition of the juveniles and trained to 90% reliability by the first author. Absolute frequency data were recorded for each videotaped test session by focal animal technique. Data were recorded separately for each member of a peer group, thus, for test sessions from the nonseparated conditions, tapes were viewed three times. Each animal in a peer group served as a focal for the entire 10-min recording period. A number of social and solitary behavior categories were recorded. Nonsocial behavior categories that occurred with sufficient frequency for analysis were defined as follows: (a) *locomote*—ambulation of one or more full steps, (b) *environmental exploration*—manual or oral exploration or manipulation of the physical surroundings, (c) *self-directed*—self-directed activity such as grooming, scratching, digit-sucking, etc, (d) *stereotypy*—any repetitive (three or more times) and rhythmic motor movement, (e) *vocalize*—any audible sound produced by the focal monkey, (f) *inactive*—a stationary position with no simultaneous motor activity.

Social behaviors were recorded in the nonseparated conditions. Those that occurred with sufficient frequency for analysis included: (a) *contact cling*—mutual gross body contact or mutual ventral contact with embrace with one or more other animals, (b) *partial contact*—transitory body contact other than grooming that does not include clinging, and (c) *proximity*—within a distance of 15 cm of another animal.

Data Analysis

Behavioral data were summed to provide a total frequency for each behavioral category for each animal in each condition. Nonsocial behaviors were analyzed by two-factor ANOVA (Prenatal Treatment × Testing Condition) across all five conditions; social behaviors were similarly analyzed across the three nonseparated conditions. Post-hoc comparisons were made by Scheffe tests.

Results

Nonsocial Behaviors

Overall, nonsocial behaviors were generally unaffected by prenatal treatment; however, most of the nonsocial behaviors were affected by the progressive increase in stress imposed by the testing conditions. These results are shown in Figures 1 and 2. Figure 1A shows that the prenatally stressed animals differed from controls in patterns of locomotion over the conditions, resulting in a significant conditions effect, $F(4,36) = 16.2$, $p = .0001$, and interaction, $F(4,36) = 7.1$, $p = .002$, whereas the main effect of group was not significant, $F(1,9) = .53$, $p = .48$.

Results for stereotyped behavior are shown in Figure 1B. The prenatal stress group showed a nonsignificant trend toward a higher overall frequency of stereotypies, $F(1,9) = 3.0$, $p = .11$, and this behavior varied across conditions, with both groups showing a higher stereotypy frequency in the baseline condition, $F(4,36) = 3.3$, $p = .02$. This effect was somewhat more pronounced in the prenatal stress group, although the interaction was not significant, $F(4,36) = 1.6$, $p = .20$, nor was a between-group comparison of the baseline condition alone, $p = .11$.

Environmental exploration also did not differ significantly between groups, $F(1,9) = .25$, $p = .62$, but overall frequency was higher in the baseline and the sep-noise conditions, $F(4,36) = 34.1$, $p = .0001$ (Figure 2A), although the interaction was not significant, $F(4,36) = 1.1$, $p = .36$. There was also no significant effect of prenatal treatment for inactive behavior, $F(1,9) = .09$, $p = .78$, but a highly significant effect for conditions, $F(4,36) = 45.6$, $p = .0001$ (Figure 2B). The interaction was not significant, $F(4,36) = .10$, $p = .98$. There were no significant effects for group, condition, or interaction for vocalization frequency, nor for self-directed behavior.

Social Behaviors

In contrast to the results for nonsocial behavior, differences between the prenatal treatment groups in frequencies of all three social behaviors measured

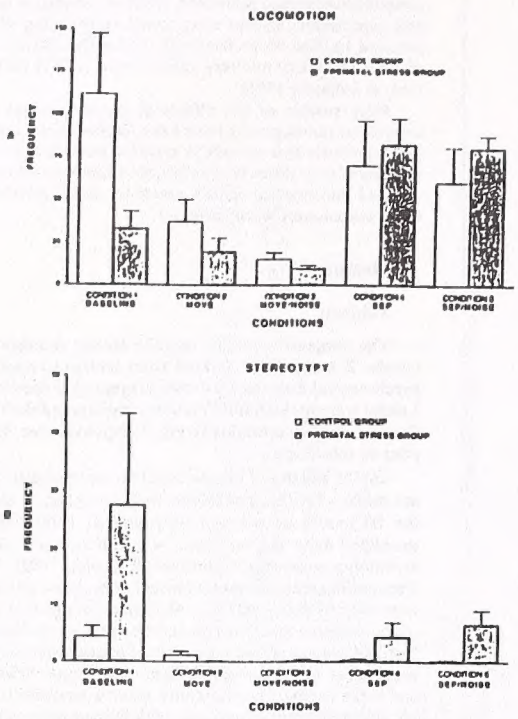


Fig. 1. (a) Mean (+*SEM*) frequency of locomotor behavior during baseline and four increasingly stressful conditions for prenatally stressed and control rhesus macaques. (b) Mean (+*SEM*) frequency of stereotyped behavior during baseline and four increasingly stressful conditions for prenatally stressed and control rhesus macaques.

were robust, as can be seen in Figure 3. As shown in Figure 3A, partial contact with other animals was higher in the control group in all three conditions, $F(1,9) = 21.6$, $p = .001$, and increased over the conditions, $F(2,18) = 8.8$, $p = .002$. Post-hoc tests showed significant group effects for the move-only and move-noise conditions, $ps < .05$, and condition effects between Conditions 1 and 3, and 2 and 3, $ps < .02$.

The control group also showed higher levels of proximity to others under the three conditions (Figure 3B, $F(1,9) = 12.7$, $p = .006$, but proximity did not differ significantly across conditions, $F = (2,18)\ 2.5$, $p = .11$. The group effect was significant in post-hoc tests for the move-only condition, $p < .01$.

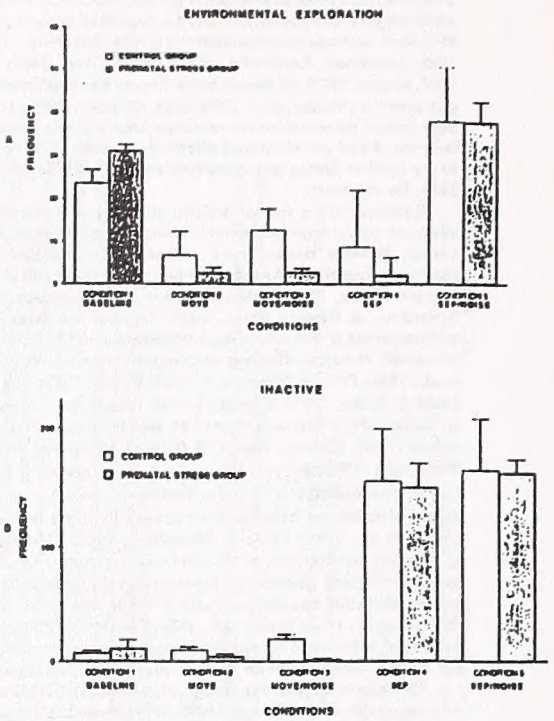


Fig. 2. (a) Mean (+*SEM*) frequency of environmental exploration during baseline and four increasingly stressful conditions for prenatally stressed and control rhesus macaques. (b) Mean (+*SEM*) frequency of inactive behavior during baseline and four increasingly stressful conditions for prenatally stressed and control rhesus macaques.

In contrast, the prenatal stress group engaged in more clinging during the three conditions as illustrated in Figure 3C, $F(1,9) = 14.9$, $p = .003$. The group effect was significant in both stress conditions, $ps < .02$, but not for baseline. This behavior also varied between conditions, $F = (2,18)\ 5.5$, $p = .01$, with a significant increase in the move-only condition over baseline, $p < .001$.

Discussion

There were no significant effects of prenatal treatment on any of the nonsocial behaviors analyzed, even though all of these behavior categories were affected

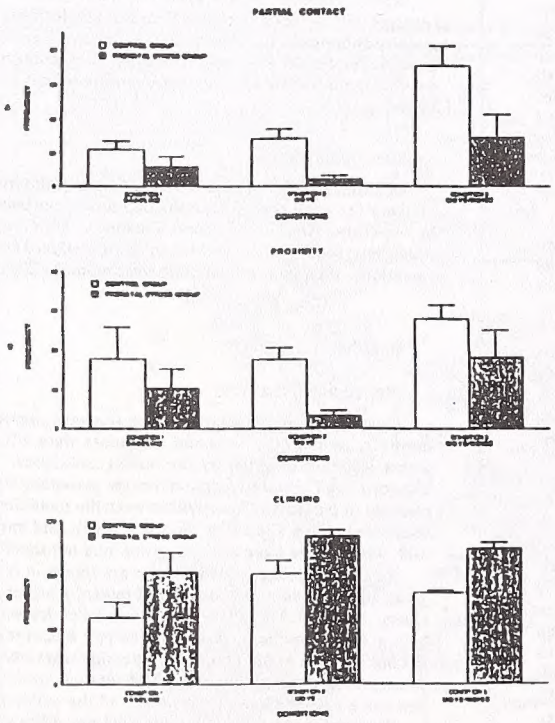


Fig. 3. (a) Mean (+*SEM*) frequency of partial contact with cagemates during baseline and two stressful conditions for prenatally stressed and control rhesus macaques. (b) Mean (+*SEM*) frequency of proximity to cagemates during baseline and two stressful conditions for prenatally stressed and control rhesus macaques. (c) Mean (+*SEM*) frequency of clinging to cagemates during baseline and two stressful conditions for prenatally stressed and control rhesus macaques.

by the testing conditions. However, some pattern differences across conditions were noted. The groups differed in patterns of locomotion across conditions, with the control group showing more locomotion in the baseline condition than the prenatally stressed group, but less under the stress conditions. In addition, there was a nonsignificant trend for the prenatally stressed group to show higher frequencies of abnormal behavioral stereotypies, which was more pronounced under baseline. In light of previous research, it is somewhat surprising that the two behaviors traditionally considered indicative of heightened "emotionality," that

is, environmental exploration and abnormal (stereotyped) behavior, were not significantly affected by prenatal treatment.

This finding contrasts with that of earlier studies of these and other rhesus infants during the 1st year of life. In the previous study, the prenatally stressed infants were consistently lower in gross motor and exploratory behavior and showed more disturbance behavior under the mildly stressful condition of being placed in a novel environment (Schneider, 1992c). These early nonsocial behavioral effects apparently diminished later in life, probably as a result of the fact that juvenile rhesus monkeys show more peer-directed behavior relative to nonsocial behavior than at younger ages (Hinde & Spencer-Booth, 1967), and this effect is particularly pronounced in peer-reared monkeys (Champoux, Metz, & Suomi, 1991).

The control group showed more social contact and proximity in both baseline and stress conditions, whereas the prenatally stressed group showed higher frequencies of mutual clinging under these conditions. While mutual clinging might in some respects be considered a highly social behavior, it is also considered an abnormal behavior observed at very high rates in peer-reared animals, but rarely observed in mother- or group-reared animals (Harlow, Harlow, & Suomi, 1971). In this study, all of the subjects were peer-reared, and both groups showed higher levels of clinging than other social contact or proximity under all conditions. However, the prenatally stressed group showed significantly higher levels of clinging than controls in both nonseparated stress conditions, but not under baseline. High levels of clinging under stress induced by peer-rearing thus appeared to be exacerbated by the prenatal stress treatment. While very few studies have examined the effects of prenatal stress on social behavior, these results for effects on normal social behavior are similar to those of Takahashi et al. (1990), who found a reduced propensity for social play in prenatally stressed rats as compared to controls.

Social behavior by both groups was enhanced under stress, suggesting that both groups utilized "social support" under stress. In previous studies of nonhuman primates experimentally exposed to stress, the presence of social companions has been found to mitigate stress responsivity of the exposed animals (Stanton, Patterson, & Levine, 1985; Weiner & Levine, 1992). This interpretation is supported by results of the post-hoc comparisons. While there were no group differences for any of the three social behaviors under baseline, the control group showed greater proximity to others in the third condition, and greater contact with others in both stress conditions. Somewhat analogously, the prenatally stressed group showed higher frequencies of clinging under both stress conditions than controls. Thus, while both groups increased their frequency of social interaction under stress conditions over baseline, the control group sought social support under stress from their peer cagemates by engaging in significantly higher levels of the normal social behaviors of proximity and contact, whereas the prenatally stressed group sought social support by significantly increasing their rates of clinging, an abnormal social behavior.

While the mechanisms by which prenatal stress alters behavioral development of the offspring are largely unknown, alterations in postnatal behavior are likely a result of some alterations in CNS function. Previous studies that have found evidence of alterations in function of brain opiate systems (Insel et al., 1990) and

several aminergic systems as a result of prenatal stress (Fride & Weinstock, 1988; Moyer et al., 1977; Peters, 1982, 1990). The diversity of behavioral effects observed in previous studies suggests that more than one CNS region or system may be involved. Thus, functional alteration in any one or more of these systems might provide a substrate for the behavioral effects observed (Kraemer, 1992). More specifically, at least some behavioral effects of prenatal stress are consistent with evidence of damage or impaired development in the hippocampus, a region known to be particularly vulnerable to perturbation during early development (Wyss & van Groen, 1989). Changes in this region may underlie the cognitive deficits as well as the enhanced behavioral responsivity to stress that prenatally stressed animals display (Bachevalier, 1991). Further, administration of glucocorticoids prenatally causes hippocampal damage in the rhesus monkey, even at low doses (Uno et al., 1990). Administration of ACTH to pregnant rhesus monkeys has been found to mimic the neuromotor and behavioral alterations observed in offspring of rhesus monkey mothers exposed to stress during gestation (Schneider et al., 1992). The consistent alterations in HPA activity observed in prenatally stressed rodents and primates thus suggest a role for this system at the CNS level in the behavioral sequelae of prenatal stress.

In summary, our results are in general agreement with those from a number of rodent studies which have indicated that early stressful experience, both pre- and postnatally, may produce long-term alterations in stress responsivity. The results reported here indicate that prenatal stress to the primate fetus may have long-term postnatal effects upon some aspects of behavioral responsivity under both baseline and stressful conditions, and that these effects may persist for at least 2 years following prenatal stress exposure. It is of interest that all three measurable social behaviors were highly affected by prenatal treatment, whereas nonsocial behaviors were relatively unaffected. Altogether, these results demonstrate consistent and lasting alterations in behavioral responsivity to later stressful experiences in prenatally stressed primate infants.

Notes

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Long-Term Effects of Prenatal Stress on HPA Axis Activity in Juvenile Rhesus Monkeys

A. S. CLARKE
Wisconsin Psychiatric Research Institute
Harlow Primate Laboratory, and
Wisconsin Regional Primate Research Center
University of Wisconsin
Madison, Wisconsin

D. J. WITTWER
Wisconsin Regional Primate Research Center
University of Wisconsin
Madison, Wisconsin

D. H. ABBOTT
Wisconsin Regional Primate Research Center, and
Department of Obstetrics and Gynecology
University of Wisconsin
Madison, Wisconsin

M. L. SCHNEIDER
Department of Kinesiology, and
Harlow Primate Laboratory
University of Wisconsin
Madison, Wisconsin

The effect of stress to the pregnant mother on hormonal responses of the offspring to stressful events was investigated in juvenile rhesus monkeys. Six pregnant monkeys were repeatedly removed from their home cages and exposed to unpredictable noise during mid- to late gestation (Days 90–145 postconception), while six undisturbed pregnant mothers served as controls. Blood samples were collected from the juvenile offspring under anesthesia on four occasions and assayed for ACTH and cortisol. In a second experiment, blood samples were collected from the awake offspring under a baseline and four progressively stressful conditions. Offspring of stressed mothers showed higher ACTH and cortisol levels than control offspring at all four anesthesia samples and at a nonanesthesized home cage baseline. Prenatally stressed offspring also showed higher ACTH values in all four stress conditions. Cortisol values were similar for the two groups under the stress conditions. The disparity between the two groups in the relationship between ACTH and cortisol was greatest in the most stressful condition, suggesting regulatory differences between the two groups. These results indicate that offspring of primate mothers stressed during pregnancy show enhanced HPA axis responsivity to stressors later in life, and concur with rodent findings indicating that prenatal stress may have long-term effects on HPA axis regulation. © 1994 John Wiley & Sons, Inc.

Reprint requests should be sent to A. S. Clarke, Ph.D., Harlow Primate Laboratory, University of Wisconsin, 22 N. Charter Street, Madison, WI 53711, U.S.A.

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Introduction

There is now evidence that psychological stress experienced by pregnant mammalian mothers during gestation may have adverse effects on prenatal and/or postnatal development of the offspring. Human studies have indicated that stressful life events experienced by the mother during pregnancy have been associated with reduced birth weights, developmental delays, and altered emotionality in the children of stressed mothers (Field, Sandberg, Quetel, Garcia, & Rosario, 1985; Lederman, Lederman, Work, & McCann, 1981; Meijer, 1985), and more recently to childhood psychopathology (Ward, 1991), and attention deficit disorder (Clements, 1992). Many human studies have suffered from numerous and inherent methodological difficulties (Copans, 1974; Istvan, 1986). However, a number of rodent studies have documented a variety of lasting postnatal physiological and behavioral effects as a result of experimentally induced stress to the pregnant mother (see Joffe, 1978, and Weinstock, Fride, & Hertzberg, 1988, for reviews).

Data from rodent studies also indicate that prenatal stress exposure may adversely affect later behavioral responses to stressful stimuli. Several investigations have reported enhanced behavioral responses to stress in prenatally stressed rats (Fride, Dan, Feldon, Halevy, & Weinstock, 1986; Fride & Weinstock, 1988). The behavioral differences are generally characterized as an increased frequency of disturbance behavior and/or heightened emotionality in prenatally stressed animals. Behavioral differences are often accompanied by enhanced hypothalamic–pituitary–adrenal (HPA) axis responses to stress (Fride et al., 1986; Takahashi, Kalin, Barksdale, & Vanden Burgt, 1988), but not in all cases (Takahashi, Hoglin, & Kalin, 1992). The disparity in findings has been related to the possible interactive effects of age (Takahashi, Baker, & Kalin, 1990) and/or sex on behavior of the prenatally stressed offspring (Ader & Plaut 1968). These somewhat inconsistent results suggest that some prenatal stress effects on postnatal stress response may be related to aspects of the prenatal stress treatment (e.g., timing, predictability, controllability), and/or the postnatal testing procedure (Takahashi et al., 1988; Takahashi et al., 1992).

Several studies have suggested that regulation of the HPA axis may be altered in the offspring of prenatally stressed rodents. Prenatally stressed offspring have been found to show greater increases in plasma corticosteroid levels following exposure to stressful stimuli than controls (Ader & Plaut, 1968; Fride et al., 1986; Fride & Weinstock 1988; Peters, 1982), although the opposite result has also been found (Pollard, 1984). Fride and colleagues (1986) found a lack of habituation of stress-induced corticosteroid response in prenatally stressed adult rats in contrast to controls. In addition, higher levels of stress-induced ACTH values have been reported for prenatally stressed rats (Takahashi et al., 1988; Takahashi & Kalin, 1991) although a similar study found contrasting results (Takahashi et al., 1992). Further, differences in basal corticosteroid levels have been reported for prenatally stressed rodents (Takahashi et al., 1988).

Results from our laboratory have shown that offspring of rhesus monkey mothers exposed to repeated stress during mid- to late gestation exhibited reduced birthweights, impaired neuromotor development, attention deficits (Schneider, 1992c), delays in acquisition of Piagetian object permanence (Schneider, 1992a), and more disturbance behavior under stressful conditions (Schneider, 1992b) as compared to controls. Analogous neuromotor and behavioral effects were observed in the offspring of rhesus monkey mothers administered ACTH during midgestation (Schneider, Coe, & Lubach, 1992), and also in infants of pregnant squirrel monkeys exposed to chronic social stress (Schneider & Coe, 1993). Further, enhanced behavioral responses to stress, higher levels of abnormal behavior, and deficits in social behavior were found in the juvenile offspring of gestationally stressed rhesus mothers (Clarke & Schneider, 1993). In other studies, frequent capture stress during midgestation was associated with increased fetal loss in pigtail monkeys (Sackett, 1990, 1991). Tests of surviving offspring showed that prenatally stressed infants exhibited morphological changes indicative of altered fetal development (dermatoglyphic asymmetry: Newell-Morris, Fahrenbruch, & Sackett, 1989), as well as cognitive deficits (Sackett, 1991).

In order to test the hypothesis that prenatally, stressed primate infants might also show enhanced psychophysiological responsivity to stress later in life, we examined pituitary–adrenocortical responses of prenatally stressed and control rhesus monkeys under anesthesia, baseline, and challenge conditions when the animals were juveniles.

Methods

Subjects

The subjects were 11 juvenile rhesus monkeys (*Macaca mulatta*). Six (4 female, 2 male) were derived from mothers exposed to chronic unpredictable psychological disturbance during pregnancy (experimental group), and 5 (2 female, 3 male) were derived from mothers undisturbed during pregnancy (control group). Group sizes were originally equal, however one control subject died of illness prior to this study.

On the second day after birth, all infants were separated from their mothers and placed in a nursery facility. Infants were socialized daily (via placement in play groups with other infants), and each cage was enriched with toys, a moving surrogate, and a climbing apparatus (Schneider & Suomi, 1992). The infants were reared under standard nursery conditions for the first month postpartum (Ruppenthal, 1979). During this month the infants also experienced frequent handling for measurement of body weight and collection of neurobehavioral and physiological data. At 1 month of age they were formed into mixed-sex peer groups of 3 monkeys each, with animals from the same prenatal treatment condition grouped together. Throughout the first year of life the monkeys also experienced frequent weighing and behavioral observations and a number of noninvasive cognitive and developmental assessment procedures requiring handling (see Schneider, 1992a, 1992c). They were also trained to voluntarily enter a portable transport cage. They thus had considerable prior experience with handling and observation by humans.

At the start of the study, the monkeys ranged in age from 14.5 to 16 months of age (mean = 15.5) for the first procedure and 17.5 to 19 months (mean = 18.5) for the second procedure. During the study they remained caged in their original peer groups in multianimal rooms. They were maintained under controlled temperature (21°C) and

lighting (16 : 8 light : dark) conditions, were fed commercial monkey biscuits and fruit daily, and had water available ad libitum.

Maternal Stress Treatment

The infants were derived from healthy laboratory-reared, multiparous females that had been randomly assigned to either control(C) or stress (S) treatment groups. Experimental (stress) treatment consisted of repeated exposure to a mild stressor during mid- to late gestation (Day 90 through Day 145 postconception). Stress treatment was administered five times per week (weekdays) at 1600 hr. The stress protocol involved transferring the pregnant female from her home cage to a smaller cage in an adjacent darkened room, and randomly administering three 1-s noise bursts over a 10-min period. The noise bursts were generated by an alarm horn that produced a 115-db, 1300-Hz sound from a distance of 1 m. This protocol was found to significantly elevate plasma corticosteroid levels of the stress-exposed mothers (Schneider, unpublished data). Control mothers were housed under identical conditions but remained undisturbed except for infrequent blood sampling (three times). There were no significant differences in age, weight, or parity between the maternal treatment groups.

Offspring Testing Procedures

Procedure 1: Response to Anesthesia

All subjects were studied simultaneously beginning at approximately 15 months of age, when blood samples were collected in conjunction with a related study that required cerebrospinal fluid (CSF) sampling under ketamine anesthesia (10 mg/kg body weight). Blood samples were collected immediately following CSF sampling. Four samples were collected at 3-week intervals over a 3-month period. During this period the animals did not experience any other manipulations (other than videotaping for later behavioral data recording; see Clarke & Schneider, 1993), and were undisturbed during the 3 months before and after this sampling period.

Procedure 2: Exposure to Progressive Stress Challenges

When the subjects were approximately 18 months of age, they were exposed to five conditions: (a) Baseline (undisturbed in the home cage), (b) Move only: The peer group was removed from the home cage via transport cage and placed in a cage of the same size in a nearby room, (c) Move/Noise: The peer group was moved as above and exposed to the identical noise stressor used in the maternal stress treatment protocol, (d) Separation: The peer group was moved and subjects were placed in individual cages the same size as the home cage, and (e) Separation/Noise: The peer group was moved and subjects were placed in individual cages and exposed to the noise stressor. Within each condition, the monkeys were exposed to the test protocol for 10 min per day for 4 consecutive days, Monday-Thursday. All groups experienced the baseline condition first, but were exposed to the stress conditions in random order.

In the baseline condition, blood samples were collected from the undisturbed subjects in their home cages following 10 min of video recording. In the experimental (stress) conditions (2–5), the groups were videotaped for 10 min after placement in the experimental cages, then either returned to the home cage, or blood-sampled and then

returned to the home cage. Blood samples were collected on Days 2 and 4 for all conditions. For blood sample collection, animals were removed from the home or experimental cage via transport cage, and then hand-captured from the transport and manually restrained.

Blood Sample Collection and Assay

Blood samples (0.5 ml) from both anesthetized and unanesthetized conditions were collected by femoral venipuncture, and processed and assayed for ACTH and cortisol concentrations as described below. All testing and blood sampling occurred between 1400–1430 hr. For the anesthesia samples, blood samples were collected immediately following CSF sampling, within 6 min of room entry by the experimenters (Sapolsky, 1982). For unanesthetized sampling, samples were collected within 4 min of room entry. In both conditions, samples were collected by femoral venipuncture into EDTA-treated Vacutainers and placed on ice. Samples were refrigerator-centrifuged for 10 min at 3000 rpm. Plasma was extracted and frozen at −70°C until assay.

Cortisol concentrations were determined by submitting duplicate portions of rhesus monkey plasma (10 μl) to a direct radioimmunoassay (Clinical Assays Gamma Coat Cortisol Kit; Dade, Baster Travenol Diagnostic, Cambridge, MA; Reinhardt, Cowley, Scheffler, Vertein, & Wegner, 1990). Inter- and intraassay coefficients of variation for the cortisol assay were both less than 5%.

ACTH concentrations were determined by applying duplicate portions of rhesus monkey plasma (75 μl) to a direct RIA modified from that previously described by Nicholsen, Davis, Sherrell, & Orth, 1984. Briefly, the antiserum, raised in a rabbit against human ACTH (1–30) ("IgG-ACTH-1", binding site human ACTH (7–18); IgG Corporation, Nashville, TN), cross-reacted with the following peptides: αMSH (<0.2%), human βMSH (<0.4%), human β-endorphin (<0.5%), human β-lipotropin (<1.3%) and human lipotropin (<0.8%). The entire assay procedure was carried out at 4°C and during each 24-hr incubation period assay tubes were kept in a darkened, humidified chamber. On Day 1, the reference standard, plasma samples, and quality control pools were diluted in RIA diluent (Nicholson et al., 1984) to a final volume of 100 μl of ACTH antiserum [1 : 10,000 in 1% v/v solution of normal rabbit serum (IgG-NRS; IgG Corporation) in RIA buffer] was added to all but the total count and nonspecific binding assay tubes. Assay tubes were then vortexed briefly and stored for 24 hr. On Day 2, 100 μl of ^{125}I-labeled human ACTH (1–39) (Nichols Insutute Diagnostic, San Juan Capistrano, CA) was added to each assay tube (approximately 3400 cpm/tube, environment to approximately 50 pg of peptide). The assay tubes were vortexed and stored for 24 hr. On Day 3, 100 μl of second antibody (goat antiserum to rabbit gamma globulin; IgG Corporation), diluted fortyfold with RIA buffer, was added to all but the total count tubes. All tubes were vortexed and stored for a further 24 hr. On Day 4, 1.5 ml of ice-cold precipitating solution (Diagnostic Products, Los Angeles, CA) was added to all but the total count tubes to separate bound from free ACTH. The assay tubes were centrifuged at 1900 g for 20 min, the supernatant was aspirated and the remaining antibody-bound ^{125}I-labeled human ACTH pellets were counted for gamma decay (10 min).

This direct assay method for ACTH was then validated for use with rhesus monkey plasma. There was no significant difference in plasma ACTH concentrations determined either directly or following extraction and lyophilization, 58.0 ± 3.8 pg/ml, respectively; mean ± *sem*; paired $t = 0.36$, $df = 23$; $p > 0.7$. Each 1-ml sample was

processed as described by Orth (1979), and recovery of unlabeled human ACTH (1–39) averaged 84.4%. Serial dilutions of rhesus monkey plasma (12.5–100 μl) from an adult plasma pool gave a displacement curve parallel to that obtained with the reference standard [0.5–24 pg/100 μl of synthetic human ACTH (1–39); (PACT 100); Bachem Inc., Torrance, CA]. Accuracy was estimated at 103.5 ± 108% ($n = 6$) from the recovery of unlabeled human ACTH (1–39), over the reference standard range of 0.5–24 pg/100 μl, added to an adult rhesus monkey plasma pool of 44.6 ± 2.8 pg/ml. The sensitivity limit of the assay at 90% binding was 0.6 pg/tube. The average intraassay precision was 5.2%, over 10 assays, with plasma pool of 53.1 ± 2.3 pg/ml. Interassay precision for the same pool was 16.6% (10 assays).

Physiological validity of the ACTH RIA method was provided by measuring changes in plasma ACTH concentrations following pharmacological manipulation of rhesus monkeys. Four female and 2 male 3-year-old rhesus monkeys were given intramuscular injections of dexamethasone (0.5 mg/kg; Hexadrol; American Regent Laboratories, Inc., Shirley, NY) at 0900 hr and 1-ml blood samples were collected immediately prior to (0 hr) and at 7 and 24 hr following the injection. Plasma ACTH concentrations fell significantly, as expected, from a mean of 96.7 pg/ml at 0 hr, 0900 hr on Day 1, to 2.5 pg/ml, 7 hr; 1600 hr on Day 1, and 5.8 pg/ml, 24 hr; 0900 hr on Day 2, $F(2,10) = 36.1$, $p < 0.001$; one-way ANOVA). Plasma cortisol concentrations showed a similar significant decline [mean at O hr: [0900 hr on Day 1]: 37.6 μl/dl; 7 hr, 1600 hr on Day 1]: 5.2 μl/dl; 24 hr [0900 hr on Day 2]: 7.7 μl/dl; $F(2,10) = 65.6$, $p < 0.001$. The same animals were given a single intravenous injection of corticotropin-releasing hormone (ovine CRH, 10 μl/kg; Bachem, CA) 2 days after the dexamethasone treatment at 1300 hr. Prior to treatment with CRH, the monkeys were anesthetized with ketamine (15 mg/kg) and were fitted with an indwelling venous catheter in the saphenous vein. One-ml blood samples were drawn from the catheter immediately prior to CRH injection (0 min) and at 15, 30, 45, and 60 min following the injection. Plasma ACTH concentrations rose steadily from a mean of 3.4 pg/ml at 0 min to a maximum of 16.4 pg/ml at 60 min. $F(4,20) = 7.3$, $p < 0.001$. Plasma cortisol concentrations showed a similar expected increase from a mean of 6.2 μl/dl at 0 min to a maximum of 19.0 μl/dl at 60 min. $F(4,20) = 6.3$, $p < 0.002$.

Data Analysis

For the anesthesia ACTH and cortisol values, separate comparisons for each hormone were made by a two-factor (Prenatal Treatment × Repeated Sample) mixed-design ANOVA. For the stress challenge samples, the means of the two cortisol values and the two ACTH values from blood samples collected in the baseline and all four stress sampling conditions were used in the two respective analyses. ACTH and cortisol data were each analyzed by a two-factor (Prenatal Treatment × Test Condition) mixed-design ANOVA with testing conditions as the repeated measure. Post-hoc comparisons were made by Scheffe tests.

Results

Anesthesia Condition

Mean plasma ACTH and cortisol values from the four anesthesia samples are shown in Figure 1. The prenatal stress group showed higher ACTH values at all four

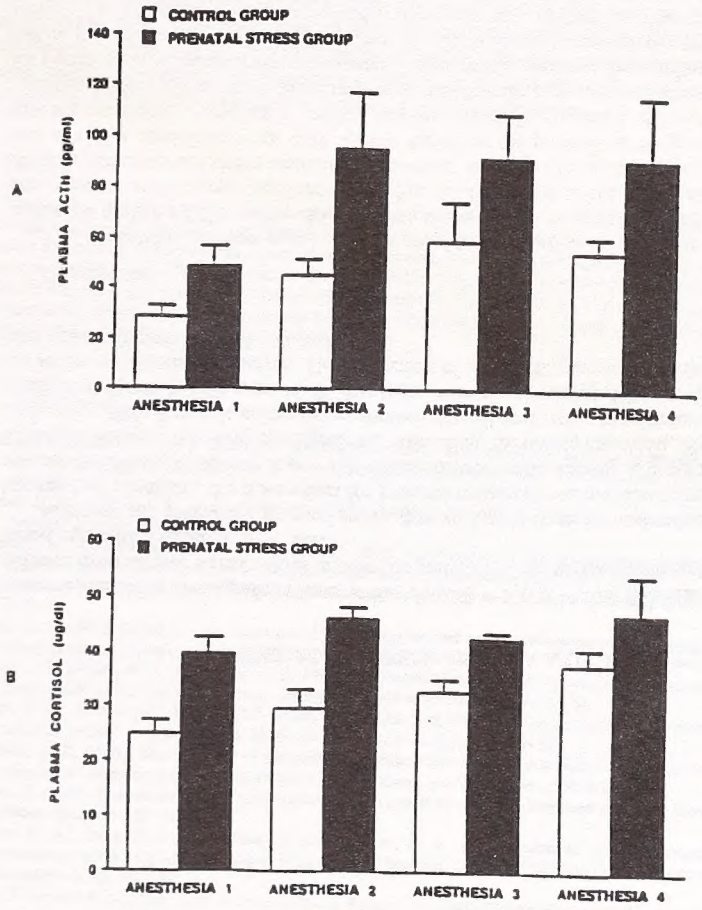


Fig. 1. Mean (±*SEM*) plasma (A) ACTH and (B) cortisol values over multiple anesthesia sampling times for prenatally stressed and control rhesus macaques.

sampling times, and this result approached significance, $F(1,9) = 3.6$, $p = .09$. Mean ACTH was lowest at the first sampling time, $F(3,27) = 5.6$, $p = .004$. (see Figure 1a). Post-hoc comparisons among sampling times revealed that ACTH values from the first sample differed from all three subsequent samples, $ps < .01$. Cortisol values for the prenatal stress group were also higher at all four sampling times, $F(1,9) = 22.1$, $p = .001$, and there was a trend for cortisol values to increase across the sampling times, $F(3,27) = 2.6$, $p = .07$. Post-hoc tests showed that the groups differed significantly from one another for the first three samples, $ps < .01$, but not for the fourth, $p = .26$.

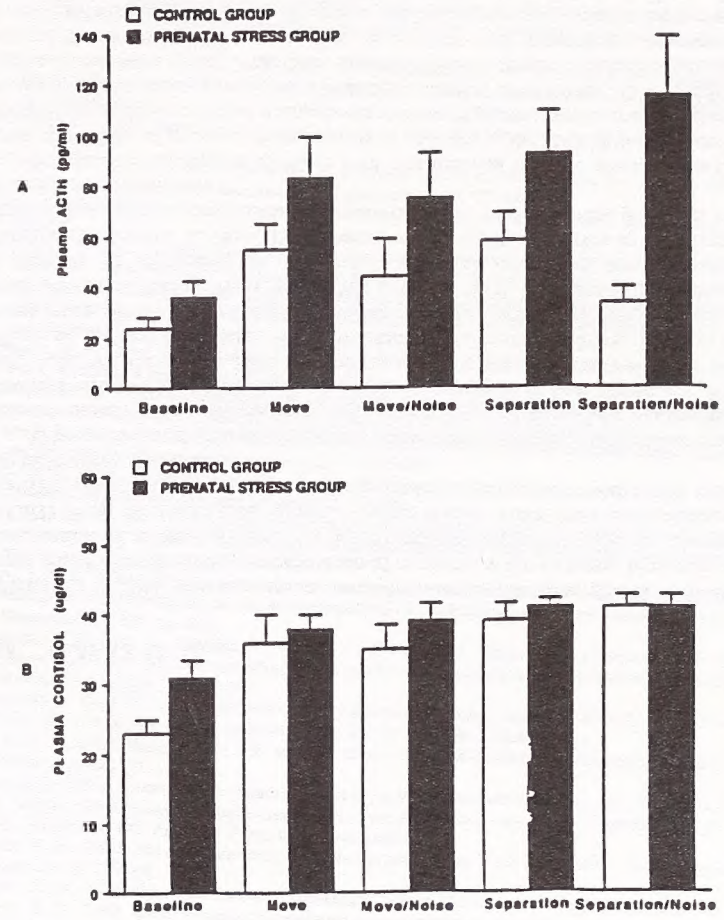


Fig. 2. Mean (±*SEM*) plasma (A) ACTH and (B) cortisol values from a baseline and four increasingly stressful conditions for prenatally stressed and control rhesus macaques.

Stress Challenge Condition

Mean plasma ACTH and cortisol values obtained in response to exposure to the five conditions from the stress challenge are shown in Figure 2. The prenatal stress group showed higher ACTH values in all conditions, and this result was marginally significant, $F(1,9) = 4.4$, $p = .06$. Mean ACTH values changed substantially across the conditions, $F(4,36) = 11.3$, $p = .0001$. The prenatal stress group showed a progressive increase across conditions, whereas values were variable across conditions for the

controls, resulting in a significant interaction, $F(4,36) = 5.1$, $p = .002$. Baseline values differed from all four stress values in post-hoc tests, $ps < .01$, and the third and fourth stress conditions differed, $p = .002$.

Although the prenatally stressed group showed higher mean cortisol values in all but the last condition, the main effect for prenatal treatment was not significant in the overall ANOVA, $F(1,9) = 1.1$, $p = .33$. Mean cortisol values increased progressively across conditions, resulting in a significant main effect for testing condition, $F(4,36) = 14.8$, $p < .0001$. Post-hoc comparisons showed that all four stress conditions differed significantly from baseline, $ps < .05$, but there were no significant differences among the stress conditions themselves. The interaction of treatment group and condition was also not significant, $F(4,36) = 1.7$, $p = .17$.

Discussion

The prenatally stressed group showed considerably higher cortisol values, and somewhat higher ACTH values than controls under all of the anesthesia conditions. The prenatal stress group also showed higher ACTH values at the stress challenge baseline and under the stress conditions. However, mean cortisol values in three of the four stressful conditions were only slightly higher in the prenatal stress group, and virtually identical to controls in the last and most-stressful condition. All four stress conditions produced cortisol values that were significantly elevated from baseline, but not significantly different from one another. These results suggest a near-ceiling effect, that is, that cortisol values in the first stress condition (in which the animals were only moved to an unfamiliar room) were close to the maximum, and thus failed to differentiate groups significantly in any of the subsequent conditions. Previous results have shown similar effects, that is, that exposure to a novel room may produce near maximum cortisol values in macaques (Clarke, Mason, & Moberg, 1988). While ketamine alone does not appear to activate the HPA axis in nonhuman primates (Walker, Pepe, Garnett, & Albrecht, 1987), hormonal values from most of the anesthesia samples were similar to those obtained following the stress conditions. This result indicates that the stress of capture, injection and disorientation prior to anesthesia likely produces HPA axis activation (Sapolsky, 1982).

In the psychological stress conditions, ACTH values were affected more than cortisol values, a result we have previously found in young rhesus monkeys (Clarke, 1993). ACTH increased across the progressively stressful conditions for the prenatally stressed group, but not for the control group. In the fifth and most-stressful condition (social separation combined with noise exposure), ACTH values for the control group were similar to baseline values, whereas those for the stress group were highly elevated over baseline. These results may indicate that the prenatally stressed group was more responsive to the later stressful conditions. Further, mean cortisol values were nearly identical between the groups in the most-stressful condition, while mean ACTH values showed the largest between-group difference in this condition. This pattern suggests that the groups may have differed in some aspect of feedback regulation within the HPA system. The higher ACTH and cortisol values in the stress group in the baseline condition also suggested a possible difference in basal HPA axis regulation between the two groups.

These results support the hypothesis that prenatal stress may have long-term effects on HPA axis regulation under both baseline and stressful conditions. From our data, it is not possible to speculate about the mechanisms that might contribute to

differences in HPA axis activity between the prenatal treatment groups. However, some possibilities include down-regulation of receptors at the pituitary, hypothalamic, or adrenal level, decreased sensitivity of the receptors at any of these levels, alteration in CRH levels, or altered CBG levels or binding affinity. More direct manipulations of the HPA axis via pharmacologic studies are needed to detect where in the HPA system the differences may lie.

Although the mechanisms are not fully understood, evidence indicates that stress-induced alterations in maternal physiology may affect fetal physiology via trophic or feedback effects that may result in alterations in regulation of fetal physiology. Naturally occurring increases in HPA axis activity in pregnant primates may enhance stress effects on the mother (Goland, Wardlaw, MacCarter, Warren, & Stark, 1991), in turn potentiating effects on the fetus. Even though the infant primate adrenal is not mature until after birth (Ducsay, Hess, McClellan, & Novy, 1991), the primate fetal HPA axis is capable of responding to exogenous hormonal stimulation by midgestation (Berghorn, Albrecht, & Pepe, 1991; Ducsay et al., 1991), and stress to the pregnant mother thus increases corticosteroid concentrations in the fetus (Ward & Weisz, 1984; Wood & Rudolph, 1984).

One possible mechanism by which HPA axis function might be altered at the CNS level as a result of prenatal stress may lie in changes in the fetal hippocampus. The normal hippocampus contains a large concentration of glucocorticoid receptors that are amassed slowly during development (Amaral, Ishizuka, & Claiborne, 1990; McEwen, Weiss, & Schwartz, 1969). It has been suggested that the release of maternal pituitary–adrenal hormones in response to stress may affect fetal hippocampal ontogeny by down-regulating glucocorticoid receptors, and/or degenerating existing hippocampal cells (McEwen, 1991; Sapolsky, 1987, 1990; Sapolsky, Uno, Rebert, & Finch, 1990) thus producing subsequent changes in the reactivity of the infant's HPA axis (Fride et al., 1986; Sapolsky, Krey, & McEwen, 1984, Sapolsky et al., 1990). The hippocampus is a brain structure that appears to be particularly vulnerable to insult during early development (Nadell & Willner, 1989; Wyss & van Groen, 1989). Prenatal administration of glucocorticoids causes hippocampal damage in the fetal rhesus monkey, even at low doses (Uno et al., 1990), in parallel with similar early postnatal effects in primates (Packan & Sapolsky, 1990; Sapolsky et al., 1990). Further, there is evidence of brain alteration of other CNS systems as a result of prenatal stress at the cellular level that may also affect later stress responses (i.e., opiate and aminergic systems: Burns, 1990; Insel, Kinsley, & Mann, & Bridges, 1990; Peters, 1990).

These findings are consistent with other data from related studies of the same animals that demonstrated enhanced behavioral response to stress in the prenatally stressed group. Previous results showed that prenatally stressed subjects exhibited less positive social behavior and more abnormal behavior under stress than controls (Clarke & Schneider, 1993). In an earlier study of the subjects as infants, the stressed group also showed increased disturbance behavior and reduced exploratory behavior in a novel environment as compared to controls (Schneider, 1992b).

Our results are also in agreement with those from a number of rodent studies that have indicated that early stressful experience, both pre- and postnatally, may produce long-term alterations in HPA axis activity. While the rodent findings are not universally consistent, the majority of studies have found that basal and/or stress-induced HPA axis activity is enhanced in prenatally stressed animals. The higher ACTH and cortisol values observed in most of these conditions in the prenatally stressed juveniles suggest

hat prenatally stressed infants show enhanced psychophysiological responsivity to tress later in life, and may also show long-term alterations in HPA axis regulatory ctivity. Altogether, these results demonstrate lasting alterations in HPA axis respon-ivity to later stressful experiences in primate infants as a result of stress to the mother luring gestation, and add to accumulating evidence for the deleterious effects of mater-al gestational stress on a number of aspects of infant development.

Notes

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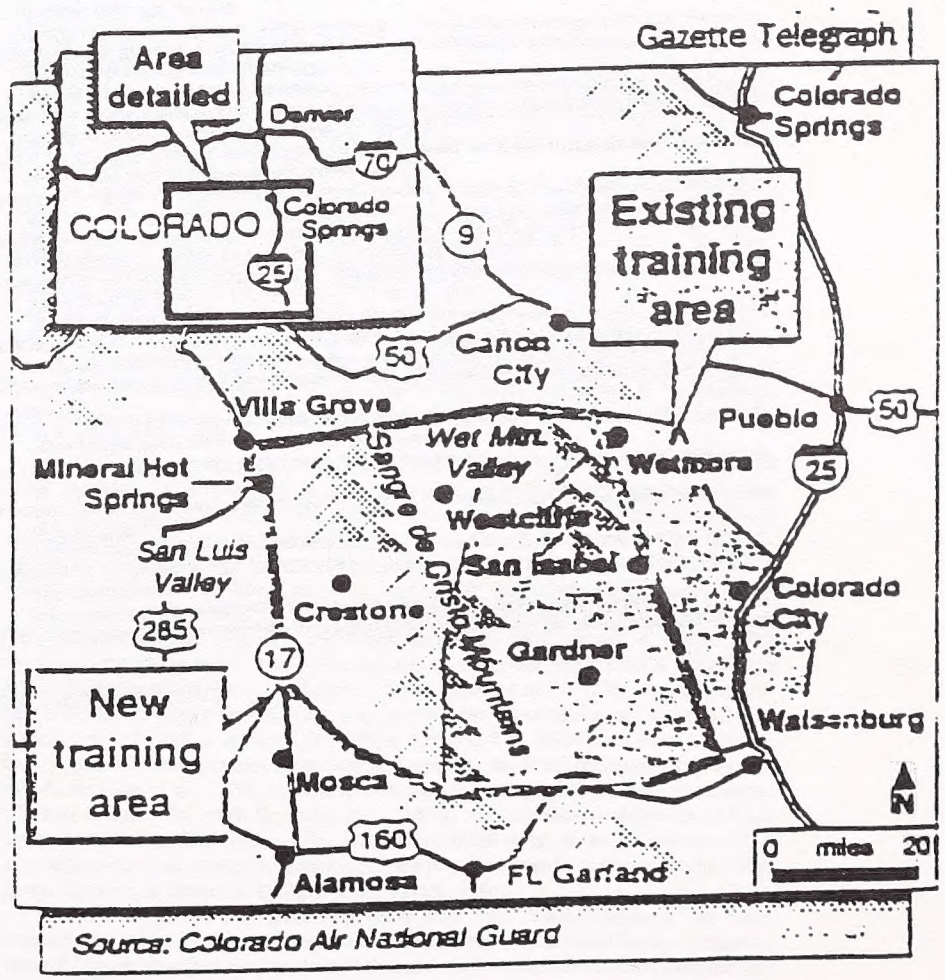
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The Colorado Airspace Initiative and Economic Impacts on Custer, Huerfano, and Saguache Counties, Colorado



Eric J. Nickell
Research Assistant, Resources for the Future
Washington, DC, February [illegible]

Resident of Southern Colorado, 1972-1991
Resident of Northern New Mexico, 1991-1992

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Perspective: Background

The Colorado Airspace Initiative proposes to alter the nature of military aircraft overflights in at least three Southern Colorado counties: Custer, Saguache, and Huerfano. During 1992, the Initiative's lead agency, the Colorado Air National Guard (COANG), adopted the name to replace a similar plan, the Redeye Complex: a Propsed Airspace Action, which received considerable local publicity. The plans both seek to support COANG's mission to maintain the availability of skilled high-performance combat pilots, all within the changing landscape of a soon-to-open Denver International Airport and shrinking national defense budgets.

Although the exact distribution of the planned training 'sorties' over a year's time and the precise route and altitude guidelines for the sorties are not known, initial estimates placed the activity level in the Dunes A, B, C Military Operations Area (MOA) at 1350 sorties per year occuring at the rate of eight per day for three days per week. Altitude ceilings would extend to 29,000 feet over the Wet Mountain Valley and to 16,000 over the San Luis Valley and the Sangre de Cristo Mountains, and altitude floors would be set at 100 feet above ground level. F-16's would predominate in the aircraft

mix, but other Falcon-series jets or the A-7 would be present on days (24 per year max) in exercise scenarios.[1]

Total retail sales in the three historically rural counties in 1984 was $44 million dollars, with the bulk of activities supporting the industries of agriculture, ranching, and tourism. Following the national trend of conversion from commodity-based land values to service-based land values, economic resources have shifted into hospitality, household services and home construction to support an increasing base of recreation and part-time resident and visitor uses. The popularity of the Great Sand Dunes National Monument has grown at a 10% annual rate recently (measured by vehicles paying entrance fees),[2] the uplands of the Sangre de Cristo Mountains appear headed for wilderness designation by the 104th Congress,[3] and retirement communities have sprung up in the Wet Mountain Valley and on the west side of the Sangres in Crestone, CO.

The primary difficulty confronting the economist in a resource use issue like this one is the result of the coinciding use of airspace by the military and the evolution of the three-county economy over the past 20 years. That is to say, the negative externalties resulting from high-speed jet aircraft flyovers cannot be disentangled from the positive externalities of an outstanding pastoral atmosphere, remarkable vistas, and the enhancement of perceptions of freedom which belong to this area. It is likely that any estimation of future income, tourist dollars spent, or land values will already have embodied in them some lost value due to the presence of unwanted aircraft activity. In other words, in the absence of benefits to having well-trained guardsmen in the U.S. Armed Forces, the removal of military overflight would likely increase the output and the worth of the region in question.

For the purposes of this study, therefore, the incremental change in airspace activity which may impact this regional economy will be carefully restricted to a change in frequency in the number of sorties to 1348/year, and the sorties will proceed at altitudes approaching 100 feet from ground level.[4] This incremental change will be accompanied by significantly higher noise levels and potentially greater startling or scaring consequences, both of which may create conditions of annoyance in the human population. Annoyance will be assumed to produce behavior effects translatable into economic actions, i.e. the market for homes or hunting licenses will be adversely affected by unpleasant incidents of noise inherent in the residential life or in the hunting experience. As a result of these market shifts to incorporate this incremental change in noise into the price structure, either the demand or the prices (or both) for products in the three-county region will drop. Aggregate losses are presented in the Conclusions section.

It is important to recognize that the benefits which will result from this incremental change in Air National Guard (ANG) activity are less easily quantifiable. ANG officials have cited the Persian Gulf War in addition to the post-Cold War downsizing movements in the Armed Forces today as evidence for the need for well-trained F-16 pilots who are not enlisted personnel.[5] The Dunes A, B, C MOA would, therefore, either preserve that pilot skill level or else improve it and by doing so enhance national security. More can be said about a monetary proxy for aggregate benefits in the Conclusions section, too.

As in all sound economic analyses, net present value (NPV) techniques are used to capture losses and benefits over many years' time. A growing economy is in flux and the damages of MOA activity will

[1] Redeye Complex: a Proposed Airspace Action, 140th Tactical Fighter Wing, Colorado Air National Guard, date unknown, pp. 14-5.
[2] Phone conversation with Bill Wellmann, November, 1992, Great Sand Dunes National Monument, National Park Service.
[3] "Opposition to Guard's Flight Plan Strengthens," Pueblo Chieftain, March 14, 1992, p. 8A.
[4] Redeye, pp. 14-15.
[5] Phone conversation with Jack Kier and Majors Steve Shields and Kent Adams, November, 1992, Air National Guard Readiness Center, Andrews AFB, MD.

persist for as many years as the overflights continue or at least until the reputation for unpleasant noise is no longer associated with the region. Likewise, the expenditures of the ANG on the MOA are likely to continue for the forseeable future, with greater uncertainty belonging to every estimate which applies to years farther and farther away from 1992.

Perspective: The Use of Resources in Society

Conflicts between users of land and airspace in most regions of the world are nothing new. In fact, Western U.S. lands, given increasing numbers of people who bid on their use and given a society becoming increasingly affluent, will continue to be the focal point of resource management conflicts.[6] The decisions made between the contestants will come about only after the expenditure of substantial resources, which is in keeping with the size of rents which the contestants will receive from the land and airspace in question. The ability to see these resource conflicts in terms of the competing uses of society's wealth is an important step forward, and this section, by venturing into more theoretical economic grounds, will elaborate on the choices which society has in its land management decisions.

When combat aircraft pilot development is considered, we have at least two potential training sites. For the sake of argument, one is located in Nevada and the other is the Dunes A, B, and C MOA. It is very possible that Nevada is one of many areas where F-16 training may take place; hence, the name of the state is used loosely here as a symbol for any such area. Benefits of training F-16 pilots accrue to society in the form of enhanced national and global security and in the form of regional cycled economic spending from military wages and purchases of goods and services.

Societal damages of training F-16 pilots are concentrated in a region when disamenity (read: unpleasant noise) effects play out on the local economy and also spread outside the region through the lost opportunity for visitation of highly desirable sites (or the purchase of homes or businesses) in the MOA. That is, the higher noise levels and frequency of startling will cause out-of-region visitors to value recreation (or part-time residence or working) locations in Custer, Huerfano, and Saguache County less. Coming to Southern Colorado will entail acceptance of a lower quality experience or else will prompt people to substitute another location with less undesirable noise characteristics.

Represent the total of benefits of F-16 pilot training by Y.

Let D1 stand for damages caused by F-16 pilot training in Nevada and D2 stand for damages anticipated for Southern Colorado.

If X1 and X2 are the resources required by the military to complete training in Nevada and Southern Colorado, respectively, then a first condition for least-cost provision of F-16 pilot training on Southern Colorado would be that

X1 + D1 > X2 + D2

or, in other words, that the costs both to non-military and military components of society be greater in Nevada than these costs are in Colorado. Recall that military expenditures own only a share of the monetary consequences of training pilots. The rest of the expenditure is undertaken by residents and all persons with potential or established interests in the area. So, to accomplish F-16 pilot training at

[6] Note, for example, the ongoing struggle in the Grand Canyon region, AZ, where flight patterns during summer months sometimes push commercial traffic into Congressionally mandated no-fly zones.

the *lowest societal cost* by selecting Southern Colorado, it is necessary that the sum of Nevada-based damages and Nevada military expenditures be greater than those identical elements for Southern Colorado!

No calculations of this sort have been located in the CO Airspace Initiative literature, and estimates of X1 and X2 were unavailable for the Dunes A, B, C MOA from Air National Guard personnel at Andrews Air Force Base, Maryland. It is generally accepted, however, that because of the logistical problems of training Denver-based aircraft in regions far removed from Denver, X1 > X2. It follows, then, that a key comparison in the least-cost calculation would ask:

Is D1 (damages from the Nevada MOA) < D2 (damages from the Dunes A, B, C MOA)? If so, by how much? If not, then the choice of Southern Colorado for training F-16 pilots is a least-cost choice.

This paper will provide preliminary estimates of D2.

Moreover, a second condition to answer the question, "Does the training of Denver-based F-16 pilots leave society better off than in the absence of this training altogether?" can be built from the preceding variables. Here, we wish to establish the training as a project which generates some positive return on its investment for society as a whole. If the total costs (expenditures and damages) outweigh the total benefits, then the project will diminish societal resources and it is possible that this investment should be moved elsewhere, either to different military projects which may achieve the same goal or else in a different human endeavor altogether.

For the F-16 pilot training to make a positive return on the taxpayer resources allocated to him, either

X1 + D1 < Y or X2 + D2 < Y

must be true. The sum of national security and regional multiplier benefits (Y) for the CO Airspace Initiative, then, is economically justifiable (in the broad society-included sense) if the total benefits of military spending are greater than the total resource costs borne by the military and by the public in carrying the training out.

Sound Exposure

Human Responses to Aircraft Noise

Before placing a value on the impact of aircraft operations within Custer, Saguache, and Huerfano Counties, it is necessary to define as accurately as possible the magnitude of aircraft noise and the frequency with which that noise may occur. It is not known how the value of real estate or recreational experience changes with the spacing of overflights in time. That is, it may be possible that one startling training run each year may degrade the quality of residence or the quality of recreation in these counties *just as much* as one startling training run occuring each day. Likewise, these losses may emerge when the timing of the flights reaches a certain degree of unpredictability. On this question, there is no consensus.

However, many categories of noise effects, such as sleep disturbance, intelligibility, and general rating of enjoyment, show that higher levels of measured sound cause higher levels of annoyance in human populations. For sleep and speech impacts, studies have plotted the number of people

disturbed over a range of decibel (dB) sound levels. For instance, 1 in 20 people, when exposed during their sleep periods to a 40dB sound burst, wake up. At 70dB, nearly 1 in 4 people tested woke from sleep.[7] These sleep interference rates, under the conditions of the draft REDEYE proposal, apply only to day sleepers in Southern Colorado, since MOA activities would cease by early evening.

On the other hand, speech intelligibility factors, or the need to shout as loud noise drowns out normal conversation, can play a significant role in accidents involving injury or death. Most accidents involve critically impaired communication, and a 70 dB noise usually requires people to raise their voices in order to be heard at normal speaking distances.[8]

A comprehensive survey of accidents taking place in National Forests from 1979 to 1989 revealed three (3) cases of riders thrown from horses after the animals reacted to a startling aircraft overflight. All in all, the risks of such an accident appear slight. Caution in judging the risks from the accident reports is advised, however, since a 1992 survey of 800 wilderness users on NF lands demonstrated that only 6.3% of accidents were reported to any authorities, and none of the accidents were reported to the Forest Service.[9]

Last of all, the effect of environmental sound levels on the enjoyment of recreation has been studied very little. It has not been possible to conduct a study asking recreationists to provide objective evaluations of their stay across a wide range of aircraft-caused noise levels. Initial comparisons of human reactions to overflight noise in wilderness versus in residential settings would suggest that people in the outdoors are at least ten times (10x) more sensitive to overflight noise.[10]

But it is known that different types of aircraft annoy wilderness users to different degrees. Low-flying jets (primarily military), for instance, annoy people in 12 wilderness areas across the country 33-47% of the time, whereas high-flying jets (military and airline) were labelled annoying 17-22% of the time.[11] Similar levels of annoyance have also been reported by day users of public lands in one of Nevada's Supersonic Operations Area (SOA).[12] More will be said about this topic below, when the annoyance levels are translated into economic decisions made by recreationists.

MOA Noise Levels

MOA operations have existed in Custer, Saguache, and Huerfano Counties for at least two decades, although no acoustic measurements have been taken in the region either to gauge the contribution of aircraft to local sound levels or to characterize the ambient (baseline) sound levels. To evaluate the COANG's proposal for redesigning the MOA complex in Colorado, it would be instructive to project the change in sound levels when the altitude floor is lowered to 100 feet AGL. Absent local data, data from other rural areas with military operations will suffice as a substitute.

Long-term average day-night noise levels have been measured as recently as 1992 in the Superstition, Dolly Sods, and Glacier Peak Wildernesses, both noted for high exposures to military aircraft

[7] Aviation Noise Effects, Federal Aviation Administration, March, 1985, pp. 51-8.
[8] *Ibid.*, pp. 43-50.
[9] Potential Impacts of Aircraft Overflights of National Forest System Wildernesses, United States Department of Agriculture, Forest Service, January, 1992, pp. 3-1:3-2.
[10] *Ibid.*, p. 2-21.
[11] *Ibid.*, p. 2-20.
[12] Monitoring the Effects of Military Air Operations at the Fallon Naval Air Station on the Biota of Nevada, Nevada Department of Wildlife, January, 1989, pp. 42-6.

overflights. Four sites in the Superstition Wilderness were chosen for acoustic monitoring during a three day period. In the Dolly Sods and Glacier Peaks Wildernesses, both average and detailed aircraft flyover acoustic data were recorded at one to two sites for a 24-hour period. The average contribution of aircraft to L_{dn}, which is a measure of sound exposure which weights night sounds more than day sounds and filters out frequencies not audible to humans, was 34 dBA (A-filtered decibels). At the moment of the aircraft flyover, the average peak sound level in the three areas was 68 dBA.[13]

To supplement these mean sound exposures, several measurements appear in the literature which were taken during military training exercises involving aircraft at low altitudes. In the Golden Trout Wilderness in 1990, maximum peak levels reached 107 dBA,[14] and in 1988 in the Labontan Valley, Nevada, the highest measurement of a flyover was 111 dB. This latter measurement was attributed to a sonic boom.[15] Draft proposals of the REDEYE Complex claim that no supersonic operations will take place in Southern Colorado.

What is important in the summary statistics above is not the magnitude of the measurements, but the similarities in airspace use and human activities which the above locations share with Custer, Saguache, and Huerfano Counties. This study assumes that, in the absence of on-site surveys of the resident and visitor population, that the best estimate of annoyance levels for this population in Southern Colorado would come from published surveys of people using wilderness and public lands elsewhere in the country.

However, for economic impacts which vary numerically with the sound levels expected under a modified MOA, *an incremental exposure measure* will be chosen to reflect the proposed change in altitude floor from 1500 feet above ground level (AGL) to 100 feet AGL. It is known that many characteristics of the atmosphere, such as temperature, humidity, and atmospheric pressure, and characteristics of the aircraft's sound spectrum, influence together the change in sound as an overflight changes in altitude. In its simplest form, a listener on the ground experiences higher sound levels as the distance to the aircraft decreases.

These sound level parameters, which apply to Turbofan Jet Aircraft flying at 400 MPH, will be adopted by this study in estimating the increment to sound exposure which applies to the *new* 100 feet AGL limit.[16]

Parameter	Change
Increase in Maximum (dBA)	24
Increase in Onrate (dB/s)	28
Increase in Exposure (dBA)	14
Increase in Audible Exposure (dBA)	14
Increase in Ability to Detect (%)	0
Change in Audible Duration (s)	+10

Because the parameters refer to aircraft changing from 1,000 AGL to 125 AGL, it is likely that they understate the change contemplated by the Dunes A, B, C MOA proposal. However, the F-16 may possess different sound characteristics than those used to produce these sound parameters. In light of the absence of historical measurements in the old Dunes MOA and acoustic experiments with F-16 aircraft, though, these numbers appear reasonable.

[13] Potential Impacts, p. 2-12.
[14] *Ibid.*
[15] Monitoring, p. 20.
[16] Potential Impacts, p. 6-2.

Economic Impacts

At the end of this section, two master tables of costs and benefits summarize the calculations explained below. The distinction between them is important to understand, since the interpretation of the final dollar flows due to the Dunes A, B, C MOA will depend on how the benefits and costs fall on various groups of people. The basic principles governing the two separate perspectives will be outlined below.

First, the master table which illustrates the societal perspective makes one large assumption. While the costs fall on people living in and visiting Southern Colorado, the benefits are total benefits for all residents of the United States. These benefits are derived according to the reasoning in Appendix A, which essentially takes the total benefit to F-16 pilot training as twice the resources expended by the military. This is the same multiplier effect used to calculate region-wide losses in income from decreases in national monument spending.[17] The difference between costs and benefits in this table gives an indication of the worth of the proposed MOA to the wider society.

In comparison, the second master table shows zero benefits but preserves those costs from the first master table which fall to residents of Custer, Saguache, and Huerfano counties. These flows of costs seek to evaluate the MOA proposal from the standpoint of the region onto itself. That is, if a bubble were placed over the economic spheres of the three Southern Colorado counties, this particular set of costs would pertain to the people who live there. Although military expenditures do not cause multiplier effects in Southern Colorado, some positive aspects of national security enhancement may fall to people there. As these benefits have not been investigated, they are assumed to be near zero. Here, the difference between costs and benefits gives an indication of the worth of the MOA to the populations who may host it.

Costs

Quantifiable

Real estate. The value in constant dollars of residential land in Custer County has grown at a 3.6% annual rate since 1990, reflecting an expanding market for second homes and higher interest in the region from retirees. Supporting this explanation of the home market, vacant land zone for residential purposes has experienced a 8.8% annual increase in real value. Speculative investors in Custer County, in addition, have weathered the effects of the opening and subsequent bankrupcy of Conquistador Ski Area (Figure 2).[18]

[17]Great Sand Dunes National Monument, Worksheet #1 Economic Benefits Resulting from Park Visitor Expenditures, 1992 (based on 1991 visitors).
[18]Custer County Assessor's Office, 1992.

Growth in Custer County Property Values, 1980-1991

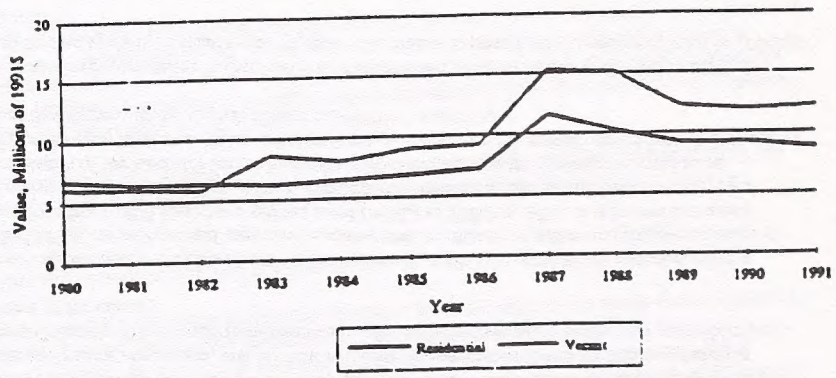


Figure 2

Huerfano County, on the other hand, responded to the ski area's opening and closing with far more sensitivity, with the result that residential lots have seen no increase in real terms since 1980 (Figure 3). However, interest in the area remains high, as vacant land zone for residential building grew from $6.8 million in 1986 to $9.9 million in 1990 (9.9% rate of increase in constant 1991 dollars).[19] Assessments of land underneath the MOA inside Saguache County are not yet available.

Growth in Huerfano County Property Values, 1980-1991

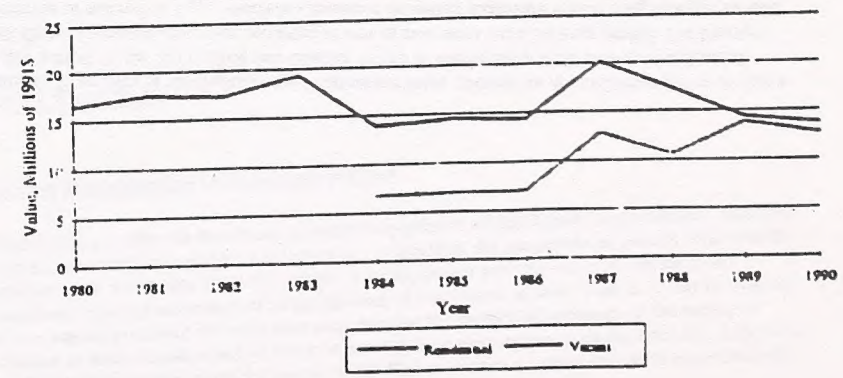


Figure 3

[19]Huerfano County Assessor's Office, 1992.

As mentioned earlier, there is reason to believe that past activities in the MOA have influenced the value of real estate investment in Southern Colorado, but the effect has been incorporated into the market and is not easily disentangled. The proposed change in MOA boundaries and operating conditions, however, may induce downward pressure on the value of land.

Studies of the value of homes built in the proximity of flight patterns of major airports have found that higher noise levels lower the worth of property by 0.5-1.9% of the market value per decibel of acoustic measurement. This study opts for the most conservative estimate of 0.5% per decibel, which was performed econometrically using a pooled sample of homes in San Francisco, St. Louis, Chicago, New Orleans, San Diego, and Buffalo. The author designed the analysis to seperate accessibility (to business, travel, commercial opportunities, etc.) effects from the noise disamenities.[20]

It is recognized that the impact of airport flight patterns on the single-family real estate market in an urban area does not match the military training flight patterns and the rural home market which is the subject of this paper. Nonetheless, people living in Custer, Saguache, and Huerfano Counties are likely to be as sensitive, if not more, sensitive to loud disturbances of their indoors or outdoors activities, and, furthermore, the speed and irregularity of the sorties in the MOA likely poses as much, if not more, of a nuisance than would a regular commercial airport. These two reasons, anyway, may help to underscore some uncertainty of the impacts and lend more credibility to the conservative estimate.

Homes in Southern Colorado, therefore, will likely drop in value by

14 dBA increase from flyovers * 0.5% value / dB = 7%.

The elasticity of losses in home value with respect to income of potential buyers is general accepted to at least 1.0. That is, as people grow wealthier, they are willing to pay a higher percentage (or at least an equal percentage) of their income to purchase environmental amenities, such as quiet, for themselves and their families.[21] Hence, as homeowners within the MOA boundary see their housing continue to appreciate in value, they will face a loss of 7% of the value of their property as a result of the anticipated impacts of MOA activities.

A principal question to answer in an appreciating real estate market faced with a substantial disamenity is the following: how are unit elastic costs annualized in a market for investments? Or, over what period of time do homeowners suffer the full 7% loss? This paper presents two scenarios. Either the loss will appear in a sale of the property in the year after the new MOA begins operation, or the loss will appear after a holding period of 10 years, at which point the property is allowed to appreciate in value before taking a loss. From this perspective, property owners either receive a 0.0% gain and a 7.0% loss with immediate exit from the market, or they anticipate a 7.0% loss in ten years' time with appreciating home value, and they place funds into a bank account each year to make up for the loss. Both figures are provided in the master summary tables.

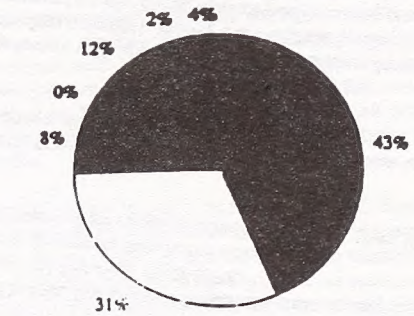
MOA impacts are assumed to strike vacant land for residential building in parallel fashion (see Figure 4). They also apply to commercial property for the first year following new MOA operation only, since the change in assessed commerical property historically is not known.

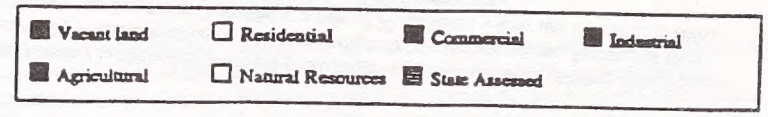
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[20] "Airport Noise, Location Rent, and the Market for Residential Amenities," Journal of Environmental Economics and Management, Jon P. Nelson, 6:320-331 (1979).
[21] *Ibid.*, p. 324.

Value of Land by Assessment Category, 1991

Custer County, Total Value $32.8 million





Huerfano County, Total Value $36.1 million

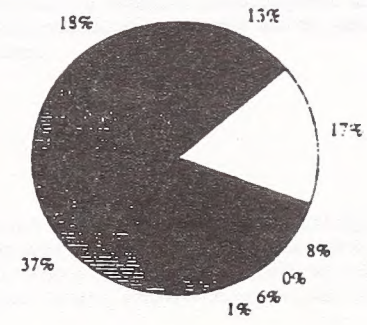


Figure 4

Recreation. Residents and visitors alike have many options at their disposal for outdoor recreation in Custer, Saguache, and Huerfano Counties. The San Carlos Ranger District of the San Isabelle National Forest, in fact, has catalogued the activities which visitors chose in fiscal year 1992. They range from fishing, hiking, horseback riding, camping, picnicking, mechanized travel and scenery viewing, to all types of hunting, nature study, water travel, winter sports, and resort, cabin, or organizanion camp use.

Total number of visits to this district in 1992 stood at 1.4 million visits or 539,000 visit-days.[22] The variety of 'outdoor activity consumption' options is important, since this paper will present MOA impacts only for the recreation activities whose expenditure data is readily available. Additional research will be required to round out this large contributor (85%, according to one local official[23]) to the local economy.

One other economic principle deserves attention here. It is popular practice in environmental impact statement analysis to account for the worth of recreation-based natural resources by measuring the expenditures of the recreationists. These might include food, lodging, and transportation costs, entrance fees, and, if the analysis is complete, equipment expenditure and the opportunity costs of taking time from work or else foregoing other recreation destinations.

Many economists do not believe that entrance fees to public lands reflect the full worth of the campers, picnickers, skiiers, and hunters who use them. Rather, the fees charged at the gate (if there are fees or if there is a gate) may underestate the willingness-to-pay for these sites on the part of users. Methods do exist to take data on the distance travelled by visitors, the time spent at the site, and the visitors' incomes, from which the full worth of the recreation activity may be assessed.[24] A variant of this method is used in this paper to answer the question of how much willingness-to-pay (or "personal satisfaction") is lost to the region if out-of-state visitors are annoyed by MOA activities.

If the only data available for publicly-owned sites consists of the total amount of fees collected, then very little can be done to assess this loss in willingness-to-pay. In those cases, the best proxy of lost benefits would be the fees collected, plain and simple. To make a final clarification, private ski resorts, private campgrounds, etc., which function freely within the market for recreation, are not likely to sell a night of camping or a day of skiing for a price that understates the value placed upon it by recreationists.

Data is available in the following areas for these statistics, and calculations were made as explained below:

a) **Data:** Great Sand Dunes National Monument, partly in Saguache County.
- (1) Total number of visitor-days, 1991.
- (2) Point of origin of all visitors, based on a one-week sample, summer, 1991.
- (3) Total expenditures of 1991 visitors on food and lodging, estimated from AAA.[25]
- (4) Distance travelled to Southern Colorado, estimated from road atlas mileage tables from the largest non-CO cities to Denver, CO.[26]
- (5) Economic multiplier effect for tourist dollar spending in Southern Colorado (2.0)

[22] Written correspondence with Cindy Riverra, San Carlos Ranger District, Canon City, CO.
[23] Phone conversation with Bob Senderhoff, Custer County Commissioners' Office, December, 1992.
[24] Economics, Natural Resources, and the Environment, Pearce and Turner, (Baltimore: Johns Hopkins University Press, 1990), pp. 153-5.
[25] Great Sand Dunes worksheet.
[26] Road Atlas of the U.S., Rand McNally, 1991.

(6) Rate of increase in the annual number of visitors (10%)[27]

Calculations:
- (1) Yearly fees, lodging, and food expenditures eliminated from local revenue if 32% of visitors annoyed by low-flying aircraft (see percentages annoyed, below) do not return to the region

- (2) Yearly visitor satisfaction lost (see percentages lost in satisfaction, below) among people annoyed by aircraft overflights (see percentages annoyed, below) as a function of their cost to travel to Southern Colorado at a rate of $0.25/mile, if they are 17% less satisfied with the absence of sound from civilization during their visit.

b) **Data:** San Carlos Ranger District, San Isabelle National Forest, mostly in Custer County.
- (1) Total fees collected at five sites, 1985-1992.
- (2) Rate of increase in the annual number of visitors (2%)
- (3) Percentage breakdown of all visitor recreation activities, 1992.[28]

Calculations:
- (1) Yearly losses in camping fees collected (proxy for willingness-to-pay) if 32% of campers annoyed by low-flying aircraft (see percentages annoyed, below) do not return to the region.

- (2) Yearly losses in hunter willingness-to-pay, based on costs for hunters *equal* to costs of campers, using the fees collected (above) and weighted by San Carlos activities chosen, if 18% of hunters annoyed by low-flying aircraft (see percentages annoyed, below) do not return to the region.

- (3) Yearly losses in wilderness user willingness-to-pay, based on costs for wilderness users *equal* to costs of campers, using the fees collected (above) and weighted by San Carlos activities chosen, if 32% of wilderness users annoyed by low-flying aircraft (see percentages annoyed, below) do not return to the region.

- (4) Yearly losses in camping experience satisfaction, based on total camping fees collected (proxy for satisfaction), if those annoyed (see below) feel that they are 17% less satisfied with the absence of sound of civilization than if they had noticed no aircraft during their visit.

- (5) Yearly losses in hunting experience satisfaction, based on total *camping* fees collected (proxy for satisfaction, weighted as in 3, above), if those annoyed (see below) feel that they are 17% less satisfied with the absence of sound of civilization than if they had noticed no aircraft during their visit.

- (4) Yearly losses in wilderness experience satisfaction, based on total *camping* fees collected (proxy for satisfaction, weighted as in 3, above), if those annoyed (see below) feel that they are 17% less satisfied with the absence of sound of civilization than if they had noticed no aircraft during their visit (Figure 5).

[27] Written communication.
[28] Written communication.

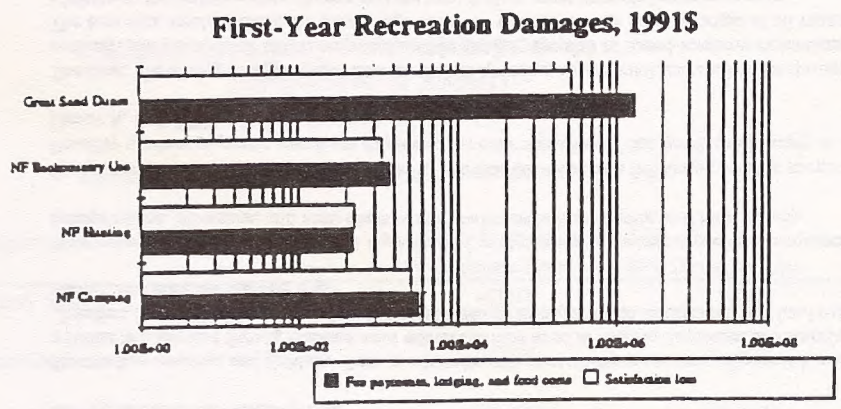


Figure 5

c) Data: (1) Recreationists visiting the Labontan Valley, Nevada, in 1989 reported annoyance with aircraft overflights in the following manner:[29]

Type of Recreationist	Percent Claiming that they will Change Visitation	Percent Annoyed
Hunter	18%	37%
Non-hunter	32%	51%

(2) Wilderness users in twelve wildernesses across the nation were surveyed by telephone in 1990-1 to rate their satisfaction with the absence of sound of civilization during their visits. They reported the following:[30]

Type of Recreationist	Rating of Satisfaction (on a scale 0-5)
Annoyed by aircraft (1)	3.4
Not annoyed by aircraft (2)	4.1
difference between (1) and (2) as a percentage of (2)	*17%*

[29] Monitoring, p. 44.
[30] Potential Impacts, p. 2-21.

Finally, the master summary tables show these recreation impacts in annualized terms. This means that the net present value of these yearly recreation losses, projected ten years into the future, have been spread out into ten equal amounts according to a 5% or 10% societal discount rate. The growth rate of the recreation visits mentioned in a-6 and b-2, above, have been built into the expenditures for the ten year period, as well.

Wildlife. The economic impacts of MOA activity on populations of wildlife overlap moderately with satisfaction values which recreationists who hunt, photograph, or view wild animals derive from recreation activities. Also, the growing literature of contingent valuation of natural resources such as wildlife points out that people place value in simply knowing of that healthy populations of bear, mountain lion, mountain goat, etc., do exist in the wild. If wildlife were to suffer impacts from aircraft overflights (such as in the case of armament-induced death or poisoning), then both the 'existence values' of wildlife and the contribution of wildlife to quality human experiences in Southern Colorado deserve attention.

Since the Dunes A, B, and C MOA proposal bars the use of chaff, flares, and ordnance, the impact on wild animals is restricted to noise. Several reviews of the sound impacts literature on this topic conclude that the animal species studied all possess essentially adaptive behaviors as far as low-level aircraft flights are concerned. Species which have not been the subject of study and which could potentially face reproductive failure or population decline or displacement include bighorn sheep, the common loon, sandhill crane, prairie falcon, peregrine falcon, bald eagle, caribou, mountain goat, and grizzly bear. Several of these species live in Southern Colorado.[31]

Biologists studying native animal species in the Labontan Valley, Nevada, have found sensitivities to sound exposure in nesting white-faced ibis, long-billed dowitchers, pintail, green-winged teal, wintering bald eagle, and widgeon. Fluctuating water levels rendered data on reproductive success incapable on commenting on aircraft impact.[32] This valley lies under a Supersonic Operation Area. Lastly, these same effects would not necessarily occur in an MOA, but the species listed should serve as a guide to biologists familiar with the Wet Mountain and Alamosa Valleys in Southern Colorado.

Despite these gaps in knowledge of wildlife response, the general conclusion of the majority of the studies in this area will be adopted in this paper. Because of adaptive behavior exhibited in animals, no adverse effects are anticipated for wildlife in Custer, Saguache, and Huerfano Counties. This conclusion extends to all domesticated animals as well, as those species live daily in contact with humans and human machines.

Unquantifiable

Accidents. The relationship between out-of-doors accidents and high sound exposure is briefly explored in the human responses section, above. Original research is required to state the likely range of damages resulting from a variety of accidents which might occur in Southern Colorado. In addition, the risks to ranchers, farmers, people on horseback, and outfitters need to be calculated. All

[31] *Ibid.*, pp. 4- 1-5.
[32] Monitoring, pp. 47-9.

risk assessment work of this nature must spell out the magnitude of the uncertainties in both risks and damages.

Commercial Airlines. Data is likely to be available on the savings to local airline companies which would result from the routing of commercial traffic through the current MOA instead of around it. Increased profitability for owners or savings in travel costs for consumers would be the cost inherent in the Dunes A, B, C MOA proposal.

Real estate. A time series data set is likely to detail the growth in commercial property value in Custer, Saguache, and Huerfano Counties. MOA activity may impact commercial property value if the commercial activity is tourism-related or sensitive to higher sound exposure. In addition, no land assessment for any category of land is yet available for Saguache County.

Recreation-all. Available data on visitor activity in the Saguache County portion of the Rio Grande National Forest and even on private lands and BLM lands in Huerfano, Saguache, and Custer Counties would supplement the fragmentary data contained in this report.

Recreation-camping. Original research is required to ascertain the full range of local vs. non-local expenditures by campers. This spending would include equipment, transportation, and food before, during, and after the camping trip.

Recreation-hunting and fishing. Data needs to be collected on the proportion of state fish and wildlife hunting and fishing licenses sold which are then used in Custer, Saguache, and Huerfano Counties. In addition, there are related expenditures on transportation, equipment, and food before, during, and after the hunting trip.

Recreation-wilderness use. Original surveying of wilderness users would elucidate the equipment, transportation, insurance, and food costs which are borne before, during, and after the trip.

Sleep interference. Available data is likely to exist on the value of a full sleep period to people. Possibly a subset of people tested are day-sleepers; their valuation of this 'good' would apply to the Dunes A, B, C MOA.

Tourism. Obtaining disaggregated data on tourist spending in the hotel, restaurant, hot springs, outfitter, and guest ranch industries would aid in gauging the size of sound-sensitive expenditures. The best data would include the percentage of return visitors and the point of origin of all visitors, in addition to the activities they choose and the total dollars spent over the last twenty years.

Benefits

If successful, the ongoing training of Air National Gaurd pilots generates economic benefits, both to the wider society in terms of national security and to regional economies where military equipment is manufactured, pilots and support personnel live, and military equipment is maintained and housed. The size of those benefits is currently under discussion at all levels of government and in many citizen organizations. Less common in the debate over the societal return on military spending, the idea of benefits net of costs (environmental, social, and opportunity costs in the macroeconomic sense) receives much less attention. It is beyond the scope of this paper to translate actual military expenditures into expenditures net of long-term costs or even to translate military spending into a realistic amount of national security benefits.

As outlined in the theoretical section on the societal economics of the MOA, the benefits of the Colorado Airspace Initiative must be compared to the sum of the military expenditures and the economic impacts upon Southern Colorado. The sum of military expenditures for a squadron of F-16 Fighting Falcons in 1991dollars is $32.7 million annually.[33] This includes training, fuel, military pay and salaries, medical facilities, safety/logistic modifications, base operating support, depot maintenance, and spares, but excludes munitions and missile training which is restricted in the Dunes A, B, C MOA (Figure 6).[34]

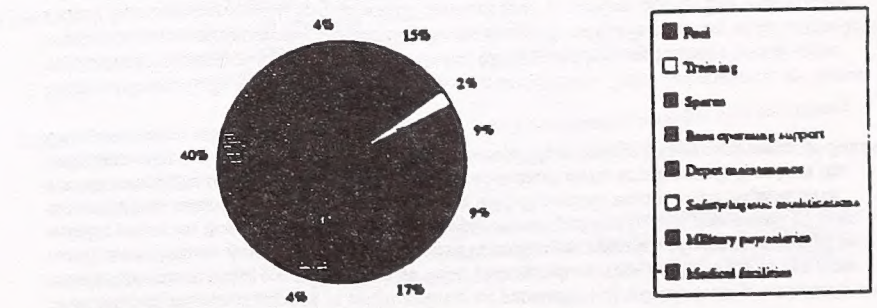


Figure 6

Of this total annual outlay, only a portion of it will be expended in the Dunes portion of the airspace complex. Broken down by sorties flown, some 31%[35] of the $32.7 million, or $10.1 million, is spent in the Dunes A, B, C MOA.

This paper assumes that the total benefits of $1.00 of military spending may be as high $2.00, making the difference between military spending benefits and military spending itself about $1.00. For the Dunes A, B, C MOA, the difference amounts to $10.1 million. If a regional economic multiplier of 2.0 is permitted, this difference can be accounted for merely by the employment and income effects of maintaining the capabilities of the 140th TFW at Buckley Air Force Base in Denver, CO.

This net benefit accrues to the U.S. as a whole; except for national security benefits falling to the population and resources of Southern Colorado, which are not calculated for the wider society, either, the benefit for Custer, Saguache, and Huerfano Counties remains at $0.00. This information is summarized in the master tables in the Conclusions section.

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[33]F-16 Fighting Falcon Salamander, 1984, p. 49.

[34]Military offials in Air National Guard management at Andrews AFB, MD, were unable to confirm these expenditures, since the structure of the Colorado Airspace Initiative was uncertain in November, 1992.

[35]Redeye, pp. 14-5.

Master Summary Table of Impact Flows: Perspective of Society (Thousands of 1991$)

Costs appear with a minus sign. Benefits appear with a plus sign.

Category	First-year Flow	Ten-Year Annualized Flows*	
		5% Discount Rate	10% Discount Rate
Property Values	-$4,200	-$510	-$400
Recreation Values	-$2,000	-$2,300	-$1,800
Military Values	+$10,000	+$7,700	+$6,100
NET	+$3,800	+$4,890	+$3,900

Table 1

Master Summary Table of Impact Flows: Perspective of Three Colorado Counties (Thousands of 1991$)

Costs appear with a minus sign. Benefits appear with a plus sign.

Category	First-year Flow	Ten-Year Annualized Flows*	
		5% Discount Rate	10% Discount Rate
Property Values	-$4,200	-$510	-$400
Recreation Values	-$2,000	-$2,300	-$1,800
Military Values	+$0	+$0	+$0
NET	-$6,200	-$2,810	-$2,200

Table 2

Conclusions

By focusing on changes in value and growth in the scale of both real estate and recreation markets, this paper has erected a framework for calculating preliminary social costs of the Dunes A, B, C portion of the Military Operations Area complex known as the Colorado Airspace Initiative. The magnitude of military spending in the Dunes portion and, by extension, the magnitude of national security and economic multiplier benefits, has also been estimated (Tables 1 and 2).

If losses in property values are realized within one year of MOA activities, they amount to $4.2 million, nearly doubling the losses in recreation spending and values, which stand at $2.0 million for the first year. Air National Guard benefits to society, apportioned for the Dunes A, B, C component, will likely be $10.0 million/year.

On the other hand, if the growth rates of the various markets are projected through 10 years of time, and if property owners begin saving money to offset their losses at the end of 10 years, the picture changes slightly. At a social discount rate of 5%, the net present value of recreation losses become $2.3 million annually, and the property values decrease by a net present value of $0.51 million annually. At 10%, these same recreation losses drop to $1.8 million/year, and the property values losses fall to $0.40 million/year.

Air National Guard expenditures for 10 years time were treated as if military spending were an investment yielding $10.0 million annually. At the 5% rate, this is equivalent to $7.7 million/year, and at 10%, this is equivalent to $6.1 million. Hence, from the perspective of society, the outcome of benefit flows less cost flows is always positive.

As mentioned earlier, if Custer, Saguache, and Huerfano Counties receive zero benefits from the MOA expenditures, then the impacts, from a Southern Colorado perspective, are solely cost flows at a rate of -$6.2 million for the first year, and between -$2.2 and -$2.8 million annualized over 10 ten years.

Taken together, the total costs and benefits assigned by this analysis make up only one piece of larger economic questions such as:

1. Is Southern Colorado the least-cost site for conducting F-16 pilot training?

and

2. Is the F-16 pilot training as set forth in the draft REDEYE proposal a socially worthwhile investment, and if so, how worthwhile?

To answer these questions, projected expenditures for alternate MOA's, the damages associated with alternate MOA's, and the whole gamut of military spending benefits must be researched and discussed.

In fact, both the factors of uncertainty and ignorance have acted to reinforce the preliminary nature of this paper's costs and benefits. While growth trends in Southern Colorado's population, economy, and visits by recreationists appear solid, there is no guarantee that they will mimic the rates of growth seen during the 1980's. Examination of this resource conflict between military and noise-sensitive populations, however, must acknowledge the growing role of service-based, scenery-motivated spending in Custer, Saguache, and Huerfano Counties. If recreation spending and recreation-based

values are not included, any analysis of economic impacts is unacceptable because of gross incompleteness.

Indeed, the monetary estimates above will themselves be judged as incomplete, if only for reasons of resource and time constraints. The real estate market for Saguache county has been left out here in its entirety. Many noise-sensitive sectors of the local economy have not been explored, such as the outfitter, guest ranch, and lodging industries. More accurate results would follow from on-site surveys of property owners and from a broader range of recreation-related expenses, such as hunting and fishing licenses, transportation, food, and equipment. Last of all, enormous improvements in the accuracy of impacts would result from open dissemination of military budget and MOA training flight path, altitude, and frequency information.

Finally, these results are provided in the belief that at least one estimate of the impact of a resource management decision, no matter how incomplete and uncertain, is a good deal better than having no estimates made at all. To the extent that this estimate provokes more accurate ones to be made later, it will have succeeded.

The author would like to thank Bill Weida of the Colorado College, Mike Toman of Resources for the Future and Johns Hopkins SAIS students, Grace Buckowski of the Rural Alliance, Chris Griffiths of the Custer County Action Association, Jack Kier and colleagues at the Air National Guard Readiness Center, Bob Senderhoff of Custer County, Cindy Riverra of the U.S. Forest Service, and Doug at the RFF library.

Socioeconomic Implications Of The Proposed MTR And MOA Over Flights On Custer, Huerfano, Saguache and Alamosa Counties

William J. Weida
Professor of Economics
The Colorado College

August, 1993

INTRODUCTION

The residents who live under the proposed MTRs or MOAs have suffered a number of economic setbacks over the last twenty years. The economies of Custer, Huerfano, Saguache and Alamosa Counties are slowly improving, but still weak, and community leaders are trying to use a combination of agricultural and recreational activities to build a stable economic environment for the future. These plans finally seem to be working. In Custer County, the Conquistador Ski Area, which languished for years as a ward of the Small Business Administration and the RTC, is now in operation under new management. The summer Jazz Festival is widely acclaimed. A cross country ski area has been established. And a series of community-sponsored recreational events has focused attention on the valley and its scenery as a Mecca for a wide range of recreational activities. In the San Luis Valley, plans to attract tourists are well under way with new initiatives to draw tourists to the Great Sand Dunes National Monument and to the rest of the area. In Huerfano County, plans to increase tourism and attract retirees are major objectives of the county's efforts to stimulate its economy in the future and have resulted in the construction of a new Medical Center/Veteran's Nursing Home.

At the same time these regions try to implement and encourage programs to turn their stagnant economies around, low level flights by the Colorado Air National Guard have been a constant source of irritation to ranchers, to full time residents, and to the very visitors these regions try to attract. Now the Colorado Air National Guard proposes to expand these flights. This poses a serious, direct threat to the activities on which the counties in this region are trying to rebuild their economies.

This economic burden will be imposed on a small, relatively poor area of Colorado at the whim of The Colorado Air National Guard which, after almost two years of proposals and negotiations on this plan, has still made no attempt to investigate or incorporate in its proposals the economic effects of its activities. Further, according to the Guard, this proposal is occasioned by a loss of airspace resulting from construction of the new Denver Airport -- a public works project meant to provide economic benefits Denver and its residents. In this case, costs are being shifted from a wealthy section of the state to a poor section.

Residents of the areas under proposed MTRs or MOAs have now been put in the position of showing why activities of the Air National Guard should not be allowed to endanger their economy and lifestyle. Since the Colorado Air National Guard disregarded the economic impacts on regions under proposed MTRs or MOAs in its previous impact analysis, this paper will describe the potential costs and benefits of the proposed MTRs and MOAs to those who reside under them.

EXECUTIVE SUMMARY

As large ranches are being converted into smaller "mini-ranches" of 35 to 40 acres, there is little chance that agriculture will regain its economic significance. Rather, the land which once was devoted to crops and livestock will be converted to recreational purposes and seasonal second homes for people from metropolitan areas.

Development goals and objectives in all four counties have as their first priority the goal of tourism expansion.

Operations of the Colorado Air National Guard have two possible benefits: the first is national security benefit accrued from having a well-prepared guard unit, the second is the direct economic benefit from having Colorado ANG money spent in the region. The national security value that accrues to the four county area from Colorado Air National Guard activities is so small it is unimportant. Benefits from direct spending by the Colorado ANG only accrue to the Denver Area and regions outside the four county area.

The Air National Guard's own figures show that the dB levels associated with F-16 operations are not acceptable for residential, cultural, recreational, or entertainment areas, and at levels over 75 dB, "sound attenuation techniques should be required."

After all likely impacts on tourism and real estate values are compared with any benefits of Air National Guard activity, costs of over flights to each resident in the four county area who lives under a MTR or MOA will be about $365, and the costs to an average family would be about $840.

Because of the depressed state of their economies and the low income levels of the residents who live in this region, the relative costs to residents under the proposed MTRs and MOAs will be disproportionately large compared to the relative benefits to the Air National Guard and the Denver region.

The Colorado Airspace Initiative would allow the Colorado Air National Guard to shift costs from wealthier areas around Denver to four poor and depressed counties. The Guard should use the forthcoming EIS to show how it either intends to mitigate these costs or how it intends to reimburse the residents of the four counties.

ANALYSIS

General Considerations:

An Environmental Impact Statement must consider all potential economic costs and benefits arising from a proposed activity. For the last three decades it has been common practice to consider among these costs the *externalities* -- those costs and benefits that fall on persons other than those responsible for the activity. In the case of the impact of the MTRs or MOAs on the residents of the Wet Mountain and San Luis Valleys, negative externalities represent economic costs that could arise from noise pollution, increased military air traffic in civilian flying areas, fires from flares, and other factors.

In addition, in so far as the proposed actions significantly threaten the unique lifestyle of the residents of the region under a proposed MTR or MOA, an economic analysis should also attempt to calculate the costs of these impacts. While most of these economic costs are likely to be probabilistic events, this is also true of the various accident and range fire scenarios the Air National Guard must consider before scheduling training operations. Thus, calculating such economic costs is consistent with considering other problems and probabilistic events that may effect the inhabitants of the region.

General Economic Conditions:

Custer County

The economy of Custer County is built on the twin pillars of agriculture and recreation, and the Wet Mountain Valley has focused all its efforts on building a stable economic environment around these two activities. The agricultural base is very narrow, being almost totally confined to cattle and hay, and it is therefore very susceptible to losses that might occur in these two areas. The contribution of agriculture and recreation to the total economy of the region is significant. Total net income in Custer County in 1987 was about $10,500,000. Of this, agriculture contributed about $6 million and tourism contributed about $1.8 million.[1] In total, these two enterprises accounted for about 75% of the total economic activity in the county.

[1]1987 Census of Agriculture, Advance County Report, Bureau of the Census, Washington, D.C., February, 1989 and The Economic Impact of Travel on Colorado Counties, A Study Prepared for the Colorado Tourism Board, U.S. Travel Data Center, December, 1985.

The economic transition underway in Custer County is clearly demonstrated by the county's employment data. During the 1960's and through the middle of 1975, agriculture represented 45% of employment. By 1985, this sector had declined to 24% of total employment. The major growth sector has been Services, which include most tourist items. As the Southern Colorado Economic development District notes:

> "This shift in the major employment sectors clearly shows an area in transition. Although the traditional agricultural sector remains significant and, indeed, with the decline in Services noted during 1988-1989 is again the single largest employer, it has clearly declined in importance. As large ranches are being converted into smaller "mini-ranches" of 35 to 40 acres, there is little chance that agriculture will gain in significance. Rather, the land which once was devoted to crops and livestock will be converted to recreational purposes and seasonal second homes for people from metropolitan areas. It can be predicted, quite confidently, that the Services and Retail sectors of the economy, those sectors which serve the tourist trade and owners of second homes will expand in importance."[2]

San Luis Valley

In the San Luis Valley, personal income only rose 11.2% from 1981 to 1990, while it rose 23.2% in the state of Colorado. Much of the Valley's economic difficulty was caused by decreases in mining. Those economic sectors with growth larger than the overall 11.2% increase in total earning included wholesale trade (41.4%), the farm sector (37.1%) services (35.7%), local government and schools (34.7%) and federal government (17.2%).[3] These figures show that the economic transition in the San Luis Valley is based on Agriculture (represented by wholesale trade and agriculture) and tourism (represented by the services sector.) In fact, tourism accounted for expenditures of $60.24 million in the Valley in 1991. This was 24.5% of all retail trade. Tourism is estimated to directly employ about 1219 people in the San Luis Valley, and it is increasing in importance in an otherwise stagnant economy. For example, lodging tax revenues went up 19.8% between 1990 and 1991, and increased 33% in Alamosa County alone.[4] A comparison of basic and non-basic

[2]Southern Colorado Economic Development District, Overall Economic Development Program, Pueblo, Colorado, 1993, p. 120,121.
[3]San Luis Valley Regional Development and planning Commission, San Luis Valley Overall Economic Development Program, Alamosa, Colorado, December, 1992, p. II-67.
[4]Ibid., p. II-108,109.

industries in the San Luis Valley shows that the employment multiplier is roughly 1.7. Thus, the tourism industry is responsible for a total of about 2700 jobs in the Valley.[5]

Development goals and objectives in the San Luis Valley all involve increasing economic growth. Among the first priority goals is "tourism expansion and assessment of tourism market opportunities." A second major goal is the "preservation of the cultural and environmental heritage of the San Luis Valley," and a third goal involves expanding infrastructure [including air service]-- and this is actually a prerequisite to the first priority goals.[6]

Huerfano County

While in a rural setting, "Huerfano County is technically quite urban in nature." 67% of the population lives in incorporated communities. Services are the top employer. Tied for second are the government and retail sectors, followed by agriculture and then construction.[7] The economy and the population base have both been declining, and population is expected to continue to decline for the next 20 years.[8] Huerfano has focused its economic development in two areas: as a retirement center and as a tourist destination. Most of these efforts have been local, bootstrap efforts, and they have succeeded in gaining a scenic highway designation for the main highway and in getting a new Medical Center/Veteran's Nursing Home. The number one priority of Huerfano County's development strategy is to continue the development of tourism.[9]

Benefits of the MTRs or MOAs To Residents of the Region

While operations of the Colorado Air National Guard have the potential to levy substantial costs on those who reside under the MTRs or MOAs, these costs could be offset by two possible benefits from Guard operations. The first is national security benefit accrued from having a well-prepared guard unit. The second is the direct economic benefit from having Colorado ANG money spent in the region.

The National Security Benefit

[5]Ibid., p. VI-19.
[6]Ibid., p. v-1,2.
[7]Southern Colorado Economic Development District, Op.Cit., p. 158,159.
[8]Ibid., p. 159,160.
[9]Southern Colorado Economic Development District, Op.Cit., p. 162-164.

The value of national security that would accrue to the residents of the region because of use of a MTR or MOA is difficult to ascertain for several reasons. First, at the current time many military units are being disbanded, and the marginal contribution of one additional fighter wing is bound to be low in such a situation. And second, the Air National Guard itself has not been capable of calculating, nor has it ever seen fit to release, its actual value to the national security structure.

Since no estimates for this figure exist, a reasonable proxy would be to assume that the value of defense is correctly denominated by the amount citizens are willing to pay for it. While everyone is well aware of the limits to citizen input on the defense budget, the rationale underlying this assumption is at least partially validated by the fact that at the current time, citizen questions concerning the value of defense have resulted in decreases in the defense budget. Further, the Colorado ANG has moved to limit flights within its MOAs to Colorado Aircraft only.

The budget for the Colorado ANG -- the amount citizens are willing to pay -- is roughly $35 million.[10] Thus, the amount of defense benefit that would accrue to each citizen of the United States is their portion of this expenditure, or about $.14. About 16,200 people live in the four county area under the proposed MTRs or MOAs. Thus, the national security value that accrues to the area by this method of calculation would be $2268. Clearly, in an area as large as the one being discussed in this paper, such a value is inconsequential.

For comparison purposes only, assume instead that operating the proposed MTRs or MOAs in the four county area would increase the overall value of US security by $10 billion when flights by other aircraft from the Air Force resume. This figure, which represents over 4 percent of total US spending for security, vastly exceeds any claims made for the value of the MTRs or MOAs. However if such an increase could be realized, the value to every citizen of the United States would be about $40, and the total value that would accrue to residents of the area under the proposed MTRs or MOAs would only be about $650,000 -- a figure that is dwarfed by the costs these same residents will incur.

[10]F-16 Fighting Falcon Salamander, 1984, p.49.

The Direct Spending Benefit

Benefits from direct spending by the Colorado ANG will accrue to the regions in which the money is spent. Thus, any positive economic effect from ANG over flights in a proposed MTR or MOA would have to arise from funds spent in the areas in which the flights occurred. Because the regions over which the ANG would fly are so far from the Denver metropolitan area where the Guard is based, and because the services and products offered by the regions over which the Guard will fly are so limited, it can be reasonably assumed that few Colorado ANG funds will be directly spent in these regions. A breakdown of ANG expenditures and the areas in which these expenditures are likely to occur confirms this assumption (see Table 1.)

Category	Percent	1991 $(Millions)	Spending Location
Fuel	15%	4.9	Denver
Training	2%	.65	Denver
Spares	9%	2.94	Denver
Base Operations Support	9%	2.94	Denver
Depot Maintenance	17%	5.56	OOS*
Safety/Logistics Modifications	4%	1.30	Denver/OOS
Military Pay/Salaries	40%	13.08	Denver/FR**
Medical Facilities	4%	1.30	Denver

*Out of State
**Front Range within a 50 nautical mile radius

Table 1
Location of Spending for ANG Activities

Thus the money spent by the Colorado ANG is not spent in any of the regions in which the MTRs or MOAs are located unless there happens to be a member of the ANG living in one of these areas. This is fairly unlikely due to the remote location of these areas. Further, the general rule of thumb is that the area of economic impact from a base occurs within a 50 NM radius. Some limited indirect spending could occur elsewhere, but it would likely be limited to the indirect purchase of agricultural products or recreation spending, and in both cases, the impact would be insignificant.

Costs of the MTRs or MOAs To Residents of the Region

There are obvious costs associated with low-level aircraft activity of the type that one would find in a MTR or MOA. An Environmental Impact Statement prepared by the Air Force for south-western Idaho stated that low level flights of fighter aircraft would cause decibel (dB) readings of between 65 and 76 dB.[11] 65 dB is the magnitude of normal conversation. 76 dB is the magnitude of heavy traffic 25 to 50 feet away, or the noise level in an average factory. Noise levels will be much higher when the heavy or dual-engined aircraft the Colorado Air National Guard says will use the MTRs or MOAs, are flying through the isolated mountain valleys.

That these noise levels are not commensurate with the recreation experience sought by visitors to the valley is recognized by the Air Force itself. In a publication entitled *Environmental Assessment of the Effects of the conversion of the 140th Fighter Wing Along IR-409 and at the Airburst Range, Colorado* prepared by the Air National Guard Readiness Center in November, 1992, the Air National Guard presents a table specifying the dB levels for the F-16 and for the F-4 at various distances (see Table 2).[12] These are the lowest and highest dB levels on the table, but multi-engined aircraft would exceed the F-4 dB levels.

Slant distance (ft)	dB Levels F-4	F-16
315	118.5	106.7
400	116.1	104.3
1000	106.2	94.2
2000	98.1	85.7
4000	88.9	76.0
6300	81.9	68.5
10000	74.1	60.1
20000	60.1	46.5

The Air National Guard's figures show that over 65 dB will be heard at a slant range of 6300 feet for the F-16 and at about 15,000 feet for the F-4. The document goes on to state that dB levels over 65 dB are not acceptable for residential, cultural, recreational, or entertainment areas, and at levels over 75 dB, "sound attenuation techniques should be required."[13] Note that the 75 dB level would be exceeded by the F-4 at

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[11] Tier One: Draft Environmental Impact Statement, *Realignment of Mountain Home Air Force Base and Proposed Expanded Range Capability*, U.S. Tactical Air Command, February, 1990.
[12] Air National Guard Readiness Center, Environmental Assessment of the Effects of the Conversion of the 140th Fighter Wing Along IR-409 and at the Airburst Range, Colorado, Washington, D.C., November, 1992, p. 3.28.
[13] Figures from Federal Interagency Committee on Urban Noise, Washington, D.C., 1980, cited in Air National Guard Readiness Center, Environmental Assessment of the Effects of the

slant ranges of almost 10,000 feet and by the F-16 at slant ranges of over 4000 feet. It is also worth noting that not only is the Air National Guard proposing to fly aircraft as low as 300 feet above the ground in the MOAs, and that it is proposing to fly 100 feet above the ground in IR-409, but, in addition, the noise tolerance figures given in this paragraph are for urban noise. More recent data suggest that persons in wilderness settings are at least ten times more sensitive to over flight noise than those in urban settings.[14]

Based on the National Guard's own statements, and on the fact that all the counties under the proposed MTRs and MOAs are all trying to transition to economies based on tourism, it is difficult to see how the National Guard justifies it current proposals for MTRs and MOAs. A 1985 study (the most recent County level data available) prepared for the Colorado Tourism Board, shows that Custer County received $1.6 million from travel expenditures in 1984.[15] Virtually all this money was spent in the Wet Mountain Valley. In 1985, this money resulted in a tourism-generated payroll of $317,000 in Custer County, and this payroll created 38 jobs in the county. In 1990, the same study projects that Custer County received $2.3 million in expenditures, had a tourism-related payroll of $406,000, and saw 41 jobs created in the county. Potential tourism losses to the Wet Mountain Valley from Air National Guard low level flight operations are thus twofold: First, over $2 million in revenues and 41 jobs will be endangered. And second, one of two major elements in the Wet Mountain Valley's economy may be damaged.

This same situation also applies to the other counties in this study. Tourism directly employ about 1219 people in the San Luis Valley and is responsible for a total of about 2700 jobs in the Valley. Tourism's importance in an otherwise stagnant economy is increasing. For example, lodging tax revenues went up 19.8% between 1990 and 1991, and increased 33% in Alamosa County alone.[16] Huerfano County is also pinning its economic development hopes on tourism.

conversion of the 140th Fighter Wing Along IR-409 and at the Airburst Range, Colorado, Washington, D.C., November, 1992, p. 3.22.

[14]Potential Impacts of Aircraft Over flights of National Forest System Wildernesses, United States Department of Agriculture, Forest Service, January, 1992, p. 2-21.

[15]The Economic Impact of Travel on Colorado Counties, A Study Prepared for the Colorado Tourism Board, U.S. Travel Data Center, December, 1985. See also The Economic Impact of Travel on Colorado, U.S. Travel Data Center, November, 1988 and Colorado's Opportunities in the U.S. Pleasure Travel Market, Longwoods TRAVEL USA, November, 1990.

[16]San Luis Valley Regional Development and planning Commission, Op.Cit., p. II-108,109.

In addition to tourism, other potential costs from over flights could affect the real estate markets. Here the damage from noise and lifestyle interruption are real, visible -- and significant. Further, the effects on real estate values will impact both vacant and occupied land because of the large amount of recreational-use vacant land. For example, of a total assessed land value of $32,797,820, $24,452,750 or about 75% is residential land in Custer County. The bulk of residential land is occupied or owned by people who selected the Wet Mountain Valley because of its rural, peaceful environment. If residential real estate values are lowered by just 1%, the direct cost to Custer County citizens would be about $245,000.[17] Later adjustments caused by this decrease in value would lower the tax base of the region and would affect other county programs.

In a paper released in June, 1993, Nickell has calculated the impact of all the costs mentioned above on the residents of the four counties that are the subject of this report. These costs were calculated in two ways, first as a cost to the actual residents who lived under the MTRs and MOAs, and then as a cost to society at large, which would include those non-residents who find their recreation, tourist, or other experiences are degraded by MTR and MOA activity. Nickell finds that the following costs would have to absorbed by residents who lived under the ANG over flight area and by all members of society:

		Ten Year Annualized Flows	
Category	1st Year Flow	5% Discount Rate	10% Discount Rate
Society at large	-$6,200	-$2,810	-$2,200
Residents	-$5,900	-$2,510	-$2,000

Table 3
Impact Flows: Perspective of Society
And 4-County Population under the MTRs OR MOAs
(Thousands of 1991$)

[17]Custer County Treasurer's Office, November, 1991.

The total population (1990) affected by over flights in the four counties is:

Custer County	1926
Huerfano County	6009
Alamosa & Saguache Cos. (less areas outside MTRs and MOAs)	8231
Total Population	16,166

Table 4
Total Population Affected by Over Flights

Thus, the costs of over flights to each resident in the four county area who lives under a MTR OR MOA will be about $365, and the costs to an average family of 2.3 members would be about $840.

Because of the depressed state of the economy and the low income levels of the residents who live in this region, 1989-1990 median household income in the four Counties was between $15,333 and $17,533.[1819] This was only about 55% of the median income for an average Colorado family. Thus, the relative costs to residents under the proposed MTRs and MOAs will be disproportionately large compared to the relative benefits to the Air National Guard and the Denver region.

Summary:

This paper has discussed the potential economic effects of the Colorado Air National Guard's proposed Air Space Initiative. The proposed MTRs and MOAs threaten a significant amount of income from tourism in four relatively poor and isolated counties. Further, the proposal is a direct threat to tourism-based economic development plans in all four counties. The Colorado Air National Guard's proposed MTRs and MOAs could also substantially reduce real estate values and, in turn, decrease each County's tax base. All these costs are significant. They are made even more important by the depressed state of the economy in each of the four counties.

The Air Space Initiative proposed by the "Mountain Militia" represents an clear case of cost shifting by the National Guard from wealthier areas around Denver to poor and depressed areas throughout the state. It is incumbent upon the Guard to demonstrate how it intends to mitigate these costs, and whether it is willing to reimburse the residents of the four counties discussed in this paper for costs which clearly exceed any benefits these residents gain from having a Guard unit in their state.

The potential economic impacts of the proposed MTRs and MOAs are significant enough to warrant a serious, complete Environmental Impact Statement that clearly evaluates all the costs and benefits incurred as a result of the Colorado Airspace Initiative. To attempt to complete an EIS without a full determination of these socioeconomic impacts would demonstrate a total disregard for the citizens of the counties over which the MTRs and MOAs would be operated.

[18]State of Colorado Data
[19]San Luis Valley Regional Development and planning Commission, Op.Cit., p. 1992, II-58.

SHIPPED MAY 0 1 1996

FROM GLEN/ MUELLER

Thank you for the opportunity to respond to the Colorado Airspace Initiative Draft Environmental Impact Statement. It is a remarkable document.

I deeply regret that I will be unable to attend the hearings in Alamosa. Please include these statements in the comment gathering process. At this point I request an extension in the response time. The document was four years in the birthing by a well financed government agency and three well paid professional firms. The impacted citizens all have other lives and responsibilities and most of us little time and little or no money for research . 1

I also wish to congratulate the 140th Wing on being one of the best fighting units around. And just think you did it all without VR-413.

I am very pleased that you have eliminated VR-412 in the Preferred Alternative. For that I do thank you.

Residents of the Baca Grande have noticed that since the SCOPING hearings in Moffat some years ago, that there have been greatly fewer low level sorties. Did you think we had forgotten about you?

In recent a telephone conversation with Mr. Steven Wolf regarding hearing locations for this round, he said, "They aren't flying now are they?" referring to the sorties. 2

HEARINGS

It was nice of you to hold the hearings in Alamosa, that way we can do our weekly shopping and attend your grueling hearings with ice cream and frozen vegetables thawing in our cars.(Wolf's suggestion) We don't need the military to help us plan our shopping trips. Would you like to go shopping for me? Hearings should have been held in Moffat , Crestone, or the Baca Grande. Moffat would have been the most appropriate location.

I double checked with the Moffat School and it was correct that when they were contacted, the school was under construction and entry into the building would have been difficult. That was over six months ago. No attempt was made to find another location, nor was there any sort of follow-up call. The school is now available according to school officials. Another slap in the face to local residents. ("We want to be good neighbors," Col.Buckingham has repeated.) 3

FINDINGS

It is interesting that in all of the studies the Air National Guard (ANG) conducted there was only Finding Of No Significant Impact. (FONSI) Furthermore there isn't even an abbreviation or acronym for Finding Of Significant Impact (FOSI). Does that mean you had *no* intention of finding a FOSI? Did this study have a predetermined outcome? Did you even proof the DEIS? 4

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RESPONSES TO COMMENTS

Response to Comment No.1

The Council on Environmental Quality provides guidelines for the preparation of Environmental Impact Statements, and the review of EISs by the public and various government agencies. These guidelines direct agencies to "allow not less than 45 days for comments on draft statements" (Section 1506.10 of these guidelines). The comment period for the CAI Draft EIS officially opened March 29, 1996 with the Notice of Availability published in the Federal Register. The initial mailing of the statement to over 750 addressees was accomplished on March 20, 1996 prior to the NOA. The close of the comment period was initially published as June 5, 1996 (68 days), and then extended to July 12, 1996 (105 days).

Response to Comment No.2

The frequency of training flights that have been observed by the public represent normal operations needed to fulfill USAF training requirements.

Response to Comment No.3

The hearing locations were selected to ensure the inclusion of a wide geographic representation of potentially interested parties within the affected areas to ensure maximum participation. The availability of meeting rooms with the requisite facilities, that could be reserved on the dates required, also was a significant factor in the selection process. Input from the Citizens Working Group and its members was also considered. These factors were considered more significant than selecting a site primarily on the basis that it might be directly under an airspace.

Response to Comment No.4

FONSI is a term from the guidelines from the Council on Environmental Quality that pertains to evaluation status for Environmental Assessments rather than Environmental Impact Statements.

The following is s short analysis of the CASI. DEIS. In some cases comments are documented and cited directly from the text. Others are not.

The understanding of this citizen is that the so-called Preferred Alternative, reflects an increase in military activity for our Region of Influence (ROI), VR-413 *or more accurately Region of Impact.*

Volume I

"Desired standard for airspace requirements." None of us always get what we 'desire' and you already have too much. No VR-413 or LeVeta MOA for you.

vi, xvi "...training necessary for them to survive in wartime taskings...." How exactly does flying in our valley duplicate "wartime taskings?" In the future are you going to start shooting at each other and up from the ground? That is war, not flying through a quite valley.

vi, "...and other Department of Defense users...." What other Defense Department users, is this included in 176 sorties? Just how much activity will we *really* experience?

vii, "...or new military airspace...." From what I have been able to find out, it does not appear that you looked very closely at finding new military airspace.

xi, E-10, Is it 2,000 or 3,000 feet over the Sangre de Cristo, Sand Dunes and Wet Mountain Wilderness Areas? Either one is too low. There is a serious echo when you fly over. Also your "whenever possible" and "operational parameters may be compromised," are questionable statements. Does that really mean you will be flying at tree top level, as you have in the past. You have and are violating wilderness values. 5

xii, What do you mean, ..."should *minimize* overflight of populated and/or noise sensitive areas? Why are the words 'will eliminate,' *not* used. Sounds like you might still be flying over our homes and causing great disturbances day and night using the "operational parameters" criteria.

xiii, xv, Which is it 300 or 500 feet, they are both too low.

xiv, I don't like your "...special training requirements...." That means you have license to do anything you choose. NOT!

xv, "...three miles right and left of center...." What center, where and exactly are you talking about, the maps are vague and coordinates are difficult for the average citizen.

THREATENED, ENDANGERED, AND SENSITIVE SPECIES

You list 27 species of concern and seem to have a superficial understanding of their lives, yet you claim FONSI by your flights. Now how can that be? You need to reread the statements by the Colorado Division of Wildlife senior biologists, who would say FOSI. In fact they did. 6

DEMOGRAPHICS

Your demographics are out of date - 1990. If you were serious about population figures, you would have contracted the Census Bureau to do a current study of the ROI. 7

RESPONSES TO COMMENTS

Response to Comment No.5

Comment noted. Text changed in Subsection E.1.7.1.

Response to Comment No.6

The ANG has been and will continue to work with the U.S. Fish and Wildlife Service, the Colorado Department of Natural Resources, the Bureau of Land Management, and other regulatory agencies to study the effects of their actions on threatened and endangered species within the areas affected by its operations. Representatives from these organizations meet periodically in a Coordination Group to discuss and study species of concern. Some ongoing study activities are currently funded by the ANG, including a study with the U.S. Forest Service on the Mexican Spotted Owl. The ANG will continue this cooperative effort and adjust its operations should any of these studies identify potential impacts on any threatened or endangered species.

Response to Comment No.7

Demographic data for the CAI EIS were collected in 1993 and 1994. Therefore, the population figures used were the latest available from the U.S. Department of Commerce. Additionally, 1990 and 1970 data was selected in order to reflect the approximate 20-year time period that military aircraft operations have been conducted in the study area, and they correspond to other socioeconomic data that was available and are presented in the CAI EIS. Council on Environmental Quality (CEQ) guidelines for EIS preparation direct agencies, in general, to use existing information to prepare EISs. Therefore, socioeconomic data available from the U.S. Department of Commerce was collected and used for the CAI EIS.

HOUSING

Your housing information is out of date - 1990. What makes you think our area is primarily a second home location. Why use 1991 figures, see 3-77, 3-78. 8

HAZARDOUS MATERIAL RELEASE

You and we are living on borrowed time. In addition if you are in "wartime taskings," what else do you have planned? 9

WILDLIFE REFUGES

Why do you think crossing the Blanca State Wildlfe Area at 500 feet is a FONSI. I bet the wildlife biologists do not think so. While there are no national wildlife refuges in the ROI, there are state refuges, and a national monument that has and will be impacted by your planes. Are state refuges less important than national ones? Further the Dunes will have significant impact with a 2000 foot flying level, or is it 500 feet or 300 feet, or ground level? 10

You admit these are recreational and habitat/nesting areas and yet you claim FONSI with military aircraft flying at 500 feet. That is not correct!

MISHAPS

The Guard may not have crashed - yet, but others have. We hear it on the news. Someday either a CANG plane or one of your "loaners" will. I once saw a fighter fly *under* a power line. He didn't crash. Other hot doggers have, and one day it will happen here. 11

Now in the matter of **birds**. Some fine day one of your birds will strike one of our birds and they both will go down. I just hope it is not over the "small" Moffat School. We have a great number of wonderful large birds in our ROI. 12

SAFETY

The fact that fighter pilots have hot dogged over the Moffat school is well documented. It would be very difficult for rural emergency response teams to handle a group of burned kids caused by a military crash. By your own admission it would take you an hour to get to an incident in an ROI. Then, what about the pain of the children and their families? 13

On the matter of **fire**, I don't believe for a moment that one of your powerful fire snorting aircraft will not one day start a fire, it will happen in our dry climate. It could be difficult for rural firefighters to contain such a fire. Plus I bet we would hear, "not ours." 14

Volume's I and II., Sand Dunes Sound Study

NOISE

Your "cumulative " noise study and day-night averaging are bogus at best. I have personally experienced sustained aircraft noise and shock noise by your planes. There was significant impact. In fact my personal past and ongoing experiences with your 15

RESPONSES TO COMMENTS

Response to Comment No.8

Housing data for the CAI EIS were collected in 1993 and 1994. The U.S. Department of Commerce provides data in accordance with the U.S. census, which is conducted every ten years. Therefore, 1990 housing figures were, and still are, the most current data available from the U.S. Department of Commerce for the entire study area.

Early in the scoping process, commentors identified a concern regarding the potential for adverse impacts to residential property values, including the second home industry.

1991 and 1971 data were used only for aggregate property values (Sections 3.4.9 and 3.8.9) because data for both 1990 and 1970 were not available from the U.S. Department of Local Affairs. Data prior to 1971 were not available.

Response to Comment No.9

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.10

The ANG makes every effort to protect designated wilderness areas from aircraft noise. Non-designated areas and general lands under the jurisdiction of the Bureau of Land Management that may be viewed as pristine areas to many citizens carry no special protections from man-made noise sources. Should specific sensitive areas or noise receptors be identified, procedures may be implemented to provide avoidance of aircraft overflights of these areas.

Response to Comment No.11

Pilots must train for combat readiness; however, the Federal Aviation Administration and the USAF have strict rules to ensure pilots operate their aircraft in a safe manner. The rules govern minimum altitudes, maximum speeds, and type maneuvers that can be performed inside and outside designated training airspace. Any misconduct by a military pilot is a serious matter and commanders have the authority to suspend pilots who willfully violate flight rules or operate in an unsafe manner.

Response to Comment No.12

Because of the potential for loss of a pilot's life and the high cost of modern military aircraft, avoidance of collisions with birds is extremely important to the ANG. The potential for a bird-aircraft strike would not change significantly under the proposal. Both the Original Proposal Alternative and the Preferred Alternative consist largely of modifications to existing airspace or establishments of new airspace in the vicinity of existing airspace. These actions would, therefore, encompass the same seasonally adjusted bird avoidance procedures associated with the bird migration corridors as are utilized currently with the existing airspace. Due to the fact that only four bird strikes have occurred in existing airspace associated with the Colorado Airspace Initiative in the past five years, the likelihood of future bird-aircraft strikes under any of the alternatives would be expected to be low.

The USAF has established a Bird/Aircraft Strike Hazard (BASH) Team to implement procedures to prevent and reduce the threat of bird/aircraft strikes, and to investigate and track any bird strikes that occur. In addition, each USAF/ANG base or flying unit is required to establish a BASH program to minimize the risk of bird strikes both at the base airfield and in airspace training routes for the unit. The USAF BASH Team assists each base or flying unit by providing Bird Avoidance Model (BAM) graphs. These graphs estimate the relative bird strike risk for flying along a specific low-level route or operations area. The model is developed on the basis of waterfowl and raptor migration and concentration data. The BAM graph depicts the severity of the bird strike hazard at a particular time of day, month, and segment of a low-level route. This information is used by the flying unit to determine the optimum route schedule and avoidance measures to be taken to prevent bird/aircraft strikes. In addition, the unit publishes Notices to Airmen (NOTAM) to alert transient aircrews to specific bird migration hazards, activity periods, and avoidance procedures.

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RESPONSES TO COMMENTS

Response to Comment No.13

Initial response to an aircraft accident is the responsibility of the civilian authorities nearest the crash site, who would provide emergency services such as fire, police, and medical assistance, as necessary. It is the responsibility of the civilian unit responding to an aircraft accident to determine what response actions they are capable of performing, including the evaluation of proper personnel training and response equipment. If the responding unit is not capable of performing certain response actions, they should request assistance from the nearest civilian unit capable of performing the required response. In the event of an aircraft accident, the nearest USAF installation would be notified by these authorities. In most cases, the nearest USAF installation would have been previously notified by the USAF unit associated with the downed aircraft. Upon notification of the aircraft accident, the commanding officer of the nearest USAF installation dispatches a Disaster Response Force. The Disaster Response Force includes personnel who have been trained to respond to this type of occurrence, and would include disaster preparedness, security police, medical, fire department, legal, munitions, mortuary, and others as required. The Disaster Response Force would assist local response teams in matters of fire suppression, site security, medical treatment and evacuation, accident evaluation and investigation, retrieval of classified materials or equipment, and protective measures, such as munitions disposal and hazardous/toxic materials protective measures. When necessary, the Disaster Response Force would coordinate activities with other regional response forces to ensure all personnel and equipment are obtained for proper mitigation and control of the accident site. It is the ANG policy to provide training, upon request, on aircraft accident emergency response to any recognized emergency response agency.

Response to Comment No.14

The fire potential associated with aircraft overflights is generated from the potential for an aircraft crash or the use of flares in training. The EIS evaluated the potential for an aircraft crash resulting from the proposal. This evaluation determined that the likelihood of an aircraft crash would be very low. Therefore, the potential for a fire resulting from an aircraft crash would also be very low. In fact, military accidents have declined in the past decade, as described in the February 1996 report of the General Accounting Office, an organization under the U.S. Congress.

RESPONSES TO COMMENTS

Authorized users of the airspace have proposed the continued use of flares in their training. However, the flares would not be released below 2,000 feet AGL. Once a flare is released, it ignites immediately. The burn time for a flare is approximately 4.0 to 4.5 seconds. In those 4.0 to 4.5 seconds, the flare falls approximately 500 feet. This leaves a safety margin of approximately 1,500 feet to allow for a flare that burns for more than 4.5 seconds to extinguish itself. The 140 WG has no knowledge of any fires being caused by flares released during current training missions by any aircraft utilizing Colorado Airspace Initiative.

Response to Comment No.15

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

"readiness," is the reason I will oppose you now and forever. If military aircraft noise is always a FONSI, why do so many former fighter pilots experience hearing loss? 16

Why should a visitor to the Great Sand Dunes National Monument experience 154.1 dBA, October 1993 and 140.4 dBA June 1994, when they should be experiencing 12 dBA and 17 dBA. These readings were taken at the same two locations.

On page H-6 you complain that only three sites supplied sound date, time and type of aircraft records. What a surprise! Maybe people did not respond because they realized the futility of the effort. The Guard /military has never responded to work that people have submitted to them. There have been thousands of volunteer hours spent trying to work thing out with you. There have been hundreds of thousands of dollars spent out of our pockets. Everything we do takes away from a normal living, attempting to protect ourselves from our own military. Just WHO is the enemy? What is worse, we are paying you to disrupt our lives and way of life.

In "Aircraft Operation", H-4 the reader finds, "These aircraft are possibly from other sources." *Possibly*! You don't know who is flying in your own airspace. Or as Col. Buckingham likes to say, "Not Ours!" You don't even know what is going on around you, further proof that you have too much airspace now and need to cut back. 17

"Ambient levels... were influenced primarily by wind and insect noise," and "...nearby creeks." (H.5) And that gentlemen, is why you can't fly in our region of impact. Your impact is too great!

STEALTH ECONOMY

After reading The Denver Business Journal's stealth economy articles, April 5-11, 1996, one wonders just what part VR-413 or any of the other routes, play in Buckley Air National Guard Base's "surveillance tasks."

Brig. Gen. Mason Whitney is quoted as saying, "There's a lot of growth potential there, if we do well. ...We have opportunity to get involved in three other mission areas, two in Colorado. But I can't discuss them." Well, what are your real plans? 18

TAKINGS

You are attempting to take our way of life away from us. People give up a lot to live in isolated areas such as ours. It also makes us very strong and determined. We love the songs of the feathered birds, many different kinds in fact; we love our creeks and their gentle sounds. We love our deer, elk, and antelope. And it is always a thrill to catch a glimpse of a coyote running through the brush and maybe a brown bear near the creek. 19

You may not, cannot take that away from us. You are not "protecting" us from anything. The real threat to America is the nut with a bomb in his pocket.

The only *honorable* action for the ANG is to remove VR-413 and the LeVeta MOA into which it feeds from the Colorado Airspace Initiative. 20

Take your noise and go away, you are unwanted and certainly unneeded!!

Thank you,

Eleanor C. Muella
191 Cascade Overlook
Alamosa, CO 81101

RESPONSES TO COMMENTS

Response to Comment No.16

It is highly unlikely that persons on the ground underneath an MTR or MOA would experience sound levels in a range where health effects are known to occur. In addition, sound caused by passing aircraft would be of short duration. Sustained high noise levels to which pilots and ground crews are exposed, and that may require hearing protection, are not comparable to those that would be experienced by the general public. Additional discussions of human health effects have been added to the EIS and are found in Subsection 4.13.

Response to Comment No.17

All known users of the proposed Colorado Airspace Initiative training airspace have been identified in the document (see Appendix N). No additional aircraft will be permitted to use the proposed or existing training airspace without supplemental environmental analysis.

Response to Comment No.18

The issues raised by this comment are beyond the scope of this EIS. Inquiries relating to this subject are better directed to 140 WG.

Response to Comment No.19

There would be some changes in sortie numbers, noise levels, and airspace dimensions under the Original Proposal and the Preferred Alternative addressed in the EIS. However, overall flying hours of the 140 WG will be reduced from 5005 hours to 4600 hours. When compared to existing military aircraft training in the study area, these changes would not change the current levels of solitude and peace and quiet experienced by residents. As under current conditions, noise from military aircraft operations may periodically disturb citizens and affect their enjoyment of solitude; however, opportunities for abundant periods of total peace and quiet would continue as under present conditions.

Response to Comment No.20

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

May 2, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

Re: Colorado Air Space Initiative, DEIS, Comment

I have read the DEIS and am generally unimpressed. After years of hearings nothing is changed. 1

Your noise studies are completely bogus. I know, I have heard screaming sound of fighter planes echo off of the front of Kit Carson.

So you would narrow the flight path of VR413 to six miles. And what happens when your planes fly outside the path, over Crestone for example. And it will happen because it has happened. Who will discipline the pilot. **WHO IS ACCOUNTABLE ?** 2

Sincerely,

John P. Mueller
former Chairman of the Baca Grande POA.
P.O. Box 216
Crestone, Colorado 81131
719-256-4820

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RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

The ANG takes the public's concerns about pilot accountability very seriously. Any misconduct by a military pilot is a serious matter. If a member of the public is experiencing any problems with the military's operations in any of the airspace in an area that affects a person directly, the public affairs officer at the nearest military installation should be contacted immediately, or call (800) 582-8507.

The Federal Aviation Administration and each military service have very strict rules to ensure pilots stay within defined training airspace. The rules govern minimum altitudes, maximum speed, and type maneuvers that can be performed inside and outside designated training airspace. Military commanders have the authority to suspend pilots who willfully violate flight rules, such as flying outside designated training airspace. The military closely manages the airspace they use to ensure they do not exceed planned parameters.

Review of
The Socioeconomic And Noise Modeling Implications Of The Proposals In The Draft Environmental Impact Statement on the Colorado Airspace Initiative

William J. Weida
Professor of Economics
The Colorado College

May 3, 1996

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Executive Summary:

This DEIS is about noise and the effect noise will have on rural and wilderness areas of Colorado. There are two ways to determine people's reactions to noise. One is to test their annoyance with the jet noise they will experience in the environment in which they live. The other is to use twenty-year-old surveys on unrelated groups of people, living in foreign, urban environments, on their reactions to a different kind of noise. The Colorado Air National Guard has chosen to pursue the second course. As a result, the Draft Environmental Impact Statement (DEIS) for the Colorado Airspace Initiative (CAI) has the following major deficiencies: 1

Failure to acknowledge the economic implications of reduced sortie rates in the La Veta MOA: 2

The DEIS makes no attempt to account for the economic impact of changes by the Air National Guard's proposed alternatives in the reduced sortie rate that has been experienced in the La Veta MOA.

Failure to Adequately Consider Economic Impacts From Proposed Activities: 3

Economic statistics in the DEIS are six years old and obsolete. Data on the economic impacts of tourism and travel is grossly understated and leads to underestimates of the damage to local economies that loss of tourism and travel will cause. The DEIS fails to acknowledge or consider the economic boom in Custer County that has occurred simultaneously with the Colorado Air National Guard's reduction in sorties. 4

Failure to test against actual reduced flight "No-Action" alternative: 5

The status quo condition that has been present in the La Veta MOA for the last five years--sortie levels of 250 to 350 sorties--is not used as the No-Action alternative.

Failure to release current sortie data and to properly account for military airspace utilization:

The Colorado Air National Guard has failed to release the actual sortie rates in the MOAs, even though these rates are required to establish the present status quo from which all proposed changes will occur.

Failure to adequately consider cumulative impacts: 6

The Colorado Air National Guard has not considered the cumulative impacts of multiple passes on a single sortie or the cumulative impacts of other aircraft, such as C-130's, that frequently use the MOAs or associated areas.

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

Socioeconomic resources, in particular local economic and employment conditions, for the La Veta MOA were previously addressed in the EIS in Subsections 3.4.9 and 4.9.4.

Response to Comment No.3

Socioeconomic data for the CAI EIS was collected in 1993 and 1994. Since the time when data was initially collected, more current information has become available. However, the time period used in the EIS, which was 1970 to 1990, was selected to match the approximate time frame that military operations had occurred in the study area and to present available data consistently across socioeconomic resources (i.e., population, housing, and the economy).

Tourism earnings are based on Standard Industrial Codes for Eating and Drinking Places and Hotel and Other Lodging Places for each region of influence (ROI) associated with the CAI. This approach was used consistently across each ROI so that all counties would be treated in the same manner using the same data.

Response to Comment No.4

Since 1970, many Colorado counties, including Custer County, have experienced an increase in total population, the number of housing units, property values, and the general local economy. Because many factors contribute to socioeconomic conditions and no absolute link between aircraft overflights and economic changes can be determined, it is not possible to conclude that an increase (or decrease) in building activity is directly attributable to a change in the number of sorties flown. Custer County appears to have experienced growth during periods of high and low aircraft activity levels. A review of socioeconomic conditions across the entire CAI study area does not reveal widespread, repetitive, or consistent patterns. For example, while some counties may have experienced an increase in population, housing, and employment, other counties may have experienced a decrease in these conditions. Additionally, some counties may have experienced a combination of growth in population and housing but a decline in local economic conditions.

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RESPONSES TO COMMENTS

Response to Comment No.5

The baseline sortie numbers, published in the Draft EIS for the No-Action Alternative, are representative of typical annual use of the La Veta MOA. For example, annual usage for La Veta MOA for 1994 was 985 sorties and in 1995 was 994 sorties. The low utilization from 1991 to 1993 was due to the 140 WG conversion from the A-7 to the F-16 aircraft.

Response to Comment No.6

Cumulative impacts were previously addressed in the EIS in Subsection 2.5 and Appendix N.

Response to Comment No.7

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Failure to provide adequate rationale for the proposed action:

Neither the Colorado Air National Guard's loss of only ten percent of its sorties to the expanded air traffic area of DIA, nor its attempts to optimize its own operations without reference to the costs that optimization levies on the rest of the state are compelling reasons for the proposed action. 7

Failure to Include Environmental Justice Section

An Environmental Justice section is required by Executive Order No. 12898 based on the income disparity between the area under the proposed MOAs and that in the rest of the state. Cost shifting by the Colorado Air National Guard from wealthy areas around Denver to poor, rural counties also mandates an environmental justice section. 8

Failure to properly account for Aircraft Noise:

In spite of statements in the Draft Environmental Impact Statement that the MOAs would be used by several types of aircraft, only the quietest--the F-16--was used to calculate the DNL sound levels used in the DEIS.

Failure to properly generate the curve used in the 1978 Schultz study:

The curve from the 1978 Schultz study which is used as the basis for annoyance calculations in the DEIS is improperly specified, incorrectly fitted, and not meant for rural or wilderness applications. 9

Failure to use the appropriate data to analyze aircraft noise:

The noise data in the model used by the DEIS to calculate annoyance levels mixes train, auto and tram data with aircraft data--all in an urban setting. Aircraft noise, when considered by itself, consistently exceeds the annoyance projections of the Schultz curve used in the DEIS.

Failure to consider the difference between urban and rural/wilderness conditions:

The DEIS attempts to apply urban traffic noise calculations to rural and wilderness aircraft noise situations without acknowledging its misuse of the urban model and without reference to standard studies that show that annoyance to sound in wilderness settings is ten times greater than it is in urban settings. 10

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Response to Comment No.8

A discussion on environmental justice has been added to the Final EIS. This new discussion may be found in Subsection 4.19. The concept of environmental justice addresses the issue of determining if actions of Federal agencies disproportionally impact the human health and environmental conditions in minority communities and low-income communities. The majority of the airspace associated with the alternatives addressed in the EIS has been in existence for many years and the changes being proposed would not significantly alter the current configuration. Environmental justice issues would be more relevant for new airspace, which occurs primarily in the southeastern portion of the State of Colorado. This new airspace does not affect any single minority group and overlies a wide variety of socioeconomic conditions.

Response to Comment No.9

These issues are addressed in their respective sections of this comment letter.

Response to Comment No.10

The approach used in the EIS has been modified. The Federal Interagency Committee on Noise (FICON), representing a variety of Federal agencies with a mix of concerns associated with aircraft noise, reviewed aircraft noise analyses issues in 1992. This committee's report (FICON 1992) continued an approach to evaluating relative impacts associated with aircraft noise that has been recognized by noise analysis experts as the most widely endorsed and comprehensive approach to aircraft noise analysis available. This approach to noise analysis was incorporated into the analyses associated with the Draft EIS. In general, Federal land use compatibility criteria are derivatives of guidelines first devised for land near airports. All land use compatibility is based on the use of Day-Night Average Sound Level (abbreviated as DNL or Ldn) as the descriptor representing community noise environments. The criteria treat areas below DNL 65 dB as compatible for all uses, including residential, and they treat DNL 65 dB as a threshold for significant exposure. Tthere is no generally accepted method for treating rural areas differently for these purposes.

However, many EIS reviewers, including some members of the Federal regulatory community, felt the application of the FICON standards, and the 65 dB threshold, to a rural setting was inappropriate for such areas with more quiet ambient noise conditions. Consequently, the use of the 65 dB threshold as the sole means to assess relative impacts or the acceptability of noise levels associated with aircraft operations addressed in the EIS has been modified and the analysis now includes additional information to evaluate potential impacts.

Introduction:

An adequate socioeconomic analysis must consider all costs and benefits before deciding if a proposed alternative should be selected. For the last two decades it has been common practice to consider among the costs those externalities -- the side effects associated with a project -- that fall on persons other than those responsible for the project. In the case of the Colorado Airspace Initiative, externalities represent costs that could arise from noise pollution, loss of land use, decreased tourism, and other factors. Externalities must be considered in a socioeconomic analysis because only by considering all costs can the agency and the residents of a region make a fully informed decision regarding a proposed project.

Accounting for these costs is important, because costs arising from externalities will be levied on the inhabitants of the region and not on those who are proposing the project. In the Draft Environmental Impact Statement for the Colorado Airspace Initiative (DEIS), the major negative externality is clearly the noise associated with aircraft operations. If this noise degrades the lifestyle in rural areas of Colorado or the wilderness experience provided by the lands under the proposed MOAs, the result could be both economic and social losses to the residents of the eleven effected counties and to the state of Colorado. 11

The purpose of a completed Environmental Impact Statement (EIS) and the data it includes (for example, the noise data in this DEIS) is to help the agency (the Air National Guard) arrive at a reasoned, accurate estimate of the environmental damage its actions will entail. Indeed, the courts have held that an EIS should

> "provide detailed discussion sufficient to allow agency decision maker to fully consider in his decisional calculus possible environmental effects of various alternative paths agency might choose..."[1]

However, the situation covered by this DEIS is unusual because there is abundant evidence that years before any data were collected for the review process, the Colorado Air National Guard, in response to the noise damage its sorties were causing, implemented an alternative to its own operations.

[1] Sierra Club v Coleman (1976, DC Dist Col) 421 F Supp 63, 6 ELR 20798.

Response to Comment No.11

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

The Guard failed in its initial attempts to form the Redeye complex because of overwhelming opposition from residents in areas such as Custer County. This opposition arose from the residents' experiences with the National Guard's low level overflights, with irresponsible pilot actions, and with the Guard's failure to take seriously citizen complaints about the numerous and undiminished problems the flights had brought to the county. The Guard knew that if these problems continued during the development of an EIS, opposition to its plans would also increase. The only way to mitigate the opposition of the residents who had to deal with the overflights was to curtail the most contentious flights, and the Guard itself took action to reduce these flights and the noise they created.

Thus, over the last five years the Guard has cut its flights through the Wet Mountain Valley to less than one-third of the 1100 sorties it was allowed to fly.[2] This action on the Guard's part has had one intended and two unintended effects:

(1) (Intended) The Guard has succeeded in lowering citizen awareness of its activities by cutting its flights.
(2) (Unintended) The Wet Mountain Valley, freed from the constant overflights, experienced an economic and real-estate boom that coincided with the reduction in National Guard flights.
(3) (Unintended) By changing its operations for an extended period, the National Guard has established a new "status quo" condition that must now be considered as the No-Action (Existing Baseline) for all analysis in the EIS.

The unintended consequences of this attempt to appease the residents of the Wet Mountain Valley are clearly an embarrassment to the Colorado Air National Guard. It has failed to release the actual data concerning its overflight activities in the Wet Mountain Valley, and has structured this DEIS as if the reduced flights had not happened. However, the conditions the Colorado Air National Guard created and sustained for the last five years are a reality, and the DEIS has completely failed to either acknowledge the economic implications of these conditions or to account for the economic impact on counties who now live under the reduced-flight MOAs of the Air National Guard's proposals to dramatically increase sortie rates. As a result, any decision based on a comparison

[2] Minutes from the Colorado Air Space Working Group, May 5, 19, 1994.

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11 continued

between the alternatives in the DEIS and what the DEIS uses as its No-Action alternative will be fatally flawed.

Failure to Adequately Consider Economic Impacts From Proposed Activities:

There are significant problems with the economic statistics presented in this DEIS. First, the statistics are six years old and hence, end before the flights were reduced in the La Veta MOA and before many important changes occurred in the counties under the CAI. Current data was readily

	COLORADO	ALAMOSA	CONEJOS	COSTILLA	CUSTER	HUERFANO	SAGUACHE
Total pers. income ($000)	71.599.972	193.121	74.468	41.980	35.487	80.288	58.663
Nonfarm pers. income	70.727.028	185.066	73.320	41.093	33.752	78.625	49.312
Farm income	872.944	8.055	1.148	887	1.735	1.663	9.351
Net earnings 1/	49.841.291	118.550	37.585	22.725	20.411	34.067	34.315
Transfer payments	9.721.280	46.007	28.324	14.500	7.249	29.101	15.447
Income maintenance 2/	733.061	6.806	5.581	3.002	595	3.656	2.887
Unemployment insurance	297.431	1.333	741	266	188	484	638
Retirement and other	8.690.788	37.868	22.002	11.232	6.466	24.961	11.922
Dividends, int., and rent	12.037.401	28.564	8.559	4.755	7.827	17.120	8.901
Population (thousands) 3/	3.465	14	7	3	2	6	5
Per capita personal income	20.666	13.942	10.043	13.070	16.583	13.636	12.191
Per capita net earnings	14.386	8.558	5.069	7.075	9.538	5.786	7.131
Per capita transfer pmts.	2.806	3.321	3.820	4.514	3.387	4.942	3.210
Per capita income maint.	212	491	753	935	278	621	600
Per capita unemp. ins.	86	96	100	83	88	82	133
Per capita retirement	2.508	2.734	2.967	3.497	3.021	4.239	2.478
Per capita divs., int., rent	3.474	2.062	1.154	1.480	3.657	2.908	1.850
Total earnings ($000)	53.340.739	131.075	32.196	17.804	14.531	33.142	31.981
Wages and salaries	42.660.322	96.831	23.097	14.279	6.049	21.627	18.944
Other labor income	4.457.401	10.195	2.781	2.050	770	2.567	2.209
Proprietors' income	6.223.016	24.049	6.318	1.475	7.712	8.948	10.828
Nonfarm	5.517.656	18.053	6.826	1.934	6.209	7.607	4.619
Farm	705.360	5.996	-508	-459	1.503	1.341	6.209
Total employment	2.166.239	7.404	2.702	1.470	885	2.427	2.085
Wage and salary jobs	1.732.287	5.868	1.713	1.044	488	1.472	1.270
Number of proprietors	433.952	1.536	989	426	397	955	815
Nonfarm /5	407.687	1.221	558	244	267	709	587
Farm	26.265	315	431	182	130	246	228
Avg. earnings per job ($)	24.624	17.703	11.916	12.112	16.419	13.656	15.339
Wage & salary earnings ($)	24.627	16.502	13.483	13.677	12.395	14.692	14.917
Avg. earnings/ prop. ($)	13.534	14.785	12.233	7.926	23.255	10.729	7.869

Source: US Department of Commerce, REIS Data, 1993

Table 1

Current Economic Data For Colorado and the Effected Counties

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RESPONSES TO COMMENTS

Response to Comment No.12

Socioeconomic data for the CAI EIS was collected in 1993 and 1994. Therefore, figures beyond this time period for the entire study area were not then available. Since the time when data was initially collected, more current information has become available. The time period used in the EIS, which was 1970 to 1990, was selected to match the approximate time frame that military operations had occurred in the study area and to present data consistently across socioeconomic resources (i.e., population, housing, and the economy). For example, population and economic data was available yearly but housing data were available only every 10 years.

available from the counties and the Department of Commerce when this DEIS was constructed, and it should have been included in this document.

Second, the DEIS combines statistics on jobs and earnings into totals for the region of impact (ROI). These totals are not only out of date, they are also nonsense. Each county is different and each county will be affected differently by the CAI. For this reason, complete data for each county should be presented. Table 1 provides 1993 Department of Commerce data on the state of Colorado and seven of the counties affected by the CAI. Similar data should be used to make comparisons in the EIS.

Third, Table 3-35 in the DEIS significantly understates the impact of tourism on the region of influence and also understates the percentage of each county's economy that depends on tourism and travel.[3] For example, a 1992 study by the Colorado Tourism Board shows that tourism and travel expenditures were twice as high in Custer County as the DEIS indicates and were four times as high in Alamosa.[4] The results given in Table 3-35 for the rest of the counties are similarly understated. This understatement, if unchanged, will mislead decision-makers about the potential costs to tourism and to the economies of these counties if, as expected, the CAI results in reduced tourism and travel.

The DEIS also fails to correctly use regional economic theory when it states that "direct impacts to socioeconomic resources are precluded by the fact that none of the airspace alternatives involve realignment of military aircraft, changes in personnel, or construction of military facilities."[5] Direct economic impacts from Guard activities at Buckley are concerned with the three issues covered in the previous quote. Direct economic impacts for the rural areas adversely affected by the CAI are concerned with spending that occurs in their regions through tourism, recreation, hunting, and other activities that bring in resources from outside the community.

For those areas outside of Denver, the direct impacts of the Colorado Airspace Initiative are likely to be substantial. Nelson found that higher noise levels lower the value of property by .5 to 1.9% of the market value

[3] Draft Environmental Impact Statement for the Colorado Airspace Initiative, Air National Guard, National Guard Bureau, Andrews Air Force Base, Maryland, March, 1996, p. 3-58.
[4] The Impact of Tourism and Travel on Colorado's Economy, The Colorado Tourism Board, 1992.
[5] Draft Environmental Impact Statement, Op. Cit., p. 2-55.

RESPONSES TO COMMENTS

Response to Comment No.13

The research completed to support the preparation of the CAI EIS follows the use of various accepted scientific methodologies used to analyze pertinent potential impacts. These analyses have been prepared by qualified scientists and engineers who perform these services for a variety of customers, including the ANG.

Response to Comment No.14

Complete socioeconomic data for each county associated with the CAI is included in the EIS. Data by individual county and by county totals for population, housing, property valuations, and tourism are presented for the region of influence defined for each MOA and MTR. Economic data for industry earnings and employment are based on individual county data that have been added to present total county earnings for each area.

Response to Comment No.15

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.16

Tourism earnings are based on data provided by the U.S. Department of Commerce for the Standard Industrial Codes for Eating and Drinking Places and Hotel and Other Lodging Places for each region of influence (ROI) associated with the CAI. This approach was used consistently across each ROI so that all counties would be treated in the same manner using the same data.

Response to Comment No.17

The role of tourism in the local economy, and its impact from the alternatives associated with the CAI, have been studied in the EIS as a part of the evaluation of socioeconomic impacts. There are a number of factors, other than aircraft operations, that may affect tourism and the use of recreational areas, including weather, the proximity of other attractions in the area, and the economy. While it is possible that a tourist visiting an area may find an aircraft overflight to be annoying, no significant change to the tourist industry would be expected considering the fact that the majority of the CAI airspace has existed for many years and the relevant influences from military aircraft operations are not changing in the study area. The contribution of tourism earnings to total industry earnings was presented in the EIS for each airspace. In all instances, these values were very consistent with overall state levels of tourism earnings as compared to industry earnings.

per decibel of acoustic measurement.[6] And, in a 1993 paper, Nickell found that the first year costs to Custer, Saguache, and Huerfano of proposed Air National Guard flying activities would be $4,200,000 in lost real estate values and $2,000,000 in lost recreation values in 1991 dollars.[7] The fact that losses in real estate values do occur because of aircraft noise was recently confirmed by the courts in the decision on Valley Citizens for a Safe Environment v Aldridge et al., US District Court, District of Massachusetts, which awarded monetary judgments to the appellates for depreciated real estate values due to low level aircraft traffic from Westover Air Force Base. (The actual amounts and the record of the decision were sealed by the court at the request of the Air Force.)

Normally, effects such as these must be regarded as speculative because it is impossible to run an experiment to test whether reduced or increased sortie activity can actually be observed in economic activity. However, when the Colorado Air National Guard reduced its sorties in the La Veta MOA in 1991 to about one-third of the maximum allowed, and when it maintained that low level of flight activity for the next five years, the Guard inadvertently performed an experiment on the economic implications of such a reduction.

The DEIS notes that "the counties within the ROI have experienced aircraft operations for a large number of years."[8] Thus, there has been an accumulation of data and experience that provides an excellent basis to compare what occurred before and after the Colorado Air National Guard decreased the number of sorties in the Wet Mountain Valley (La Veta MOA). In short, the reduction in Colorado Air National Guard flying activity coincided with an economic boom of historic proportions in Custer County. Over the five year period of reduced flying, Custer County experienced one of the biggest proportional population gains in the US--placing its growth among the top 25 counties in the country. Real estate prices and business activity soared as new residents flocked to the area, and for the most recent period, 1994-1995, Custer County was still one of

[6] Nelson, Jon P., "Airport Noise, Location Rent, and the Market for Residential Amenities," Journal of Environmental Economics and Management, No. 6, 1979, p.320-331.

[7] Nickell, Eric J., The Colorado Airspace Initiative and Economic Impacts on Custer, Huerfano, and Saguache Counties, Colorado, Resources for the Future, Washington, DC, June, 1993, p. 19.

[8] Draft Environmental Impact Statement, Op. Cit., p. 2-55.

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RESPONSES TO COMMENTS

Response to Comment No.18

In order to address concerns regarding possible devaluation of real estate, the EIS evaluated historical data for property values. This analysis compares counties within the study area for the CAI, including those areas with currently utilized military airspace, to counties outside the study area. The results indicate that all counties experienced increases in property values. Further, in terms of median property values, counties within the study area for the CAI increased 99.71 percent compared to counties outside the study area, which increased 57.74 percent. Whereas a report published by the Federal Aviation Administration concludes "that noise has been shown to decrease the value of property by only a small amount--approximately 1 percent decrease per decibel (DNL)," this analysis applies to airport/airfield environments and not land areas underlying military training airspace. Therefore, although it is not possible to absolutely conclude that counties experiencing military aircraft overflights incur any greater change in real estate values than counties not experiencing similar overflight activity, it is not likely that real estate values would drop as a result of the CAI.

Response to Comment No.19

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.20

Since 1970, many Colorado counties, including Custer County, have experienced an increase in total population, the number of housing units, property values, and the general local economy. Because many factors contribute to socioeconomic conditions and no absolute link between aircraft overflights and economic changes can be determined, it is not possible to conclude that an increase (or decrease) in building activity is directly attributable to a change in the number of sorties flown. Custer County appears to have experienced growth during periods of high and low aircraft activity levels. A review of socioeconomic conditions across the entire CAI study area does not reveal widespread, repetitive, or consistent patterns. For example, while some counties may have experienced an increase in population, housing, and employment, other counties may have experienced a decrease in these conditions. Additionally, some counties may have experienced a combination of growth in population and housing but a decline in local economic conditions.

the fifty fastest growing counties in the United States.[9] While one cannot attribute all this economic activity to the Guard's action alone, the reduction in sorties was clearly an important contributor and it emphasizes the significant economic problems that could result from an increase in National Guard flying above the 250-350 sortie level it now maintains.

Failure to test against actual reduced flight "no action" alternative:

The preparation of an EIS has, as a basic requirement, the evaluation of a No-Action alternative. The reason for this requirement is to provide a baseline against which all other alternatives can be measured. This rationale is so obvious that for the last twenty years all EISs have compared the Proposed Action alternatives to the No-Action alternative. 21

The method by which the No-Action Alternative is described must make it clear exactly what the alternative is. In this DEIS, there has been an effort on the part of the Colorado Air National Guard to confuse the public about the No-Action alternative by referring to the currently authorized sortie levels in the MOA as the No-Action alternative. In reality, the Guard has substantially reduced its flights in the Wet Mountain Valley. This means that the No-Action alternative in the La Veta MOA is actually in the 250-350 sortie range. Instead, the DEIS claims that the No-Action (Existing/Baseline) number of sorties is 445 in the La Veta Low MOA and 695 in the La Veta High MOA.[10] The courts have held that an "environmental impact statement complies with NEPA (42 USCS §§4321-4347).....when it makes available to [the] public information of [the] proposed project's environmental impact....[11] This impact is clearly the difference between the current status quo (250-350 sorties) and the preferred alternative (950 sorties). 22

There are three reasons the 250-350 sortie alternative should serve as the baseline for the comparisons about the La Veta MOA made in the DEIS: 23

[9] Nasser, Haya El, "Looking ahead, a 'settling down' as boomers age, USA Today, March 8, 1996.
[10] Draft Environmental Impact Statement, Op. Cit., p. 2-26.
[11] Trout Unlimited v Morton (1974, CA9 Idaho) 509 F2d 1276, 5 ELR 20151.

RESPONSES TO COMMENTS

Response to Comment No.21

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.22

See response to Comment No. 5.

Response to Comment No.23

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

(1) this is the perception of the No-Action alternative that has been intentionally created by the National Guard.
(2) this is clearly a feasible alternative--it has been used for five years.
(3) the reduction of flying by the Guard during the preparation of this DEIS is compelling evidence that the Guard recognizes the adverse impact of its actions and proposals.

As currently structured, the DEIS makes no attempt to address this actual status quo. The courts have repeatedly held that failure to address the status quo violates the intent of the NEPA:

(1) "Duty to prepare environmental impact statement is normally triggered when there is proposal to change status quo..."[12]
(2) "Treatment of alternatives in EIS regarding proposed flood control project was deficient in that it was impossible to determine from EIS....present...[conditions]."[13]
(3) Statement was deficient and "new statement is necessary to supplement previous statement which evaluated different set of control programs under significantly different circumstances."[14]
(4) "Injunction [against project] would be granted...where....SEIS contained inadequate discussion of no action alternative and failed to address cumulative impact of past, present, and future [actions]."[15]

The intent of each of these court rulings is clear. It is also clear that unless the EIS considers the environmental impact of its proposals for the La Veta MOA based on the 300% increase in sorties under the preferred alternative, the EIS will be deficient.

Failure to release current sortie data and to properly account for military airspace utilization:

The Air National Guard claims that "under both alternatives, military airspace utilization in Colorado, as measured by the combination of sorties -24

[12] Sierra Club v Hassell (1980, SD Ala) 10 ELR 20779.
[13] Akers v Resor (1978, WD Tenn) 443 F Supp 1355, 8 ELR 20388.
[14] Sierra Club v Block (1985, DC Dist Col) 614 F Supp 488, 15 ELR 20775.
[15] Tenakee Springs v Clough (1990, CA9 Alaska) 915 F2d 1308.

Response to Comment No.24

The baseline sortie numbers, published in the Draft EIS for the No-Action Alternative, are representative of typical annual use of the La Veta MOA. For example, annual usage for La Veta MOA for 1994 was 985 sorties and in 1995 was 994 sorties. The low utilization from 1991 to 1993 was due to the 140 WG conversion from the A-7 to the F-16 aircraft.

and total flight hours, would decrease compared to the No-Action Alternative (existing conditions)."[16] This is wrong on two counts:

(1) "Existing Conditions" are, by definition, those that currently exist (and have existed for the last five years.) In the La Veta MOA, current conditions are sortie levels of 250-350 per year. The proposed alternatives would increase these levels by a factor of three.
(2) Including flight hours in the calculation leads to an understatement of the impact when higher speed aircraft are used. The aircraft now proposed as users of the MOA are higher speed aircraft than the previous users.

As the previous section has shown, the citizens living under the La Veta MOA have been aware for the last five years that the Colorado Air National Guard has reduced its sorties in the MOA. And as the previous section also shows, an EIS must evaluate its proposed alternatives against a status quo that reflects the actual current situation. 25

The Colorado Air National Guard has failed to release the actual number of sorties it has flown in the La Veta MOAs in this DEIS, but incomplete data from the minutes of the Colorado Air Space Working Group show that the actual flight activity in the La Veto MOA was as shown in Table 2 26

Year	Sorties
1991	224
1992	346
1993	216
1994	unknown
1995	unknown

Source: Minutes from the Colorado Air Space Working Group, May 5, 19, 1994. 27

Table 2
Actual Sortie Rate In The La Veta MOA
By The Colorado Air National Guard

[16] Draft Environmental Impact Statement, Idaho Training Range, US Air Force, November, 1993., p. vi, vii.

RESPONSES TO COMMENTS

Response to Comment No.25

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.26

See response to Comment No. 24.

Response to Comment No.27

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

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The failure by the Colorado Air National Guard to release actual use data clearly violates the intent of the EIS process. The courts have held that the EIS "statement serves as full disclosure tool by providing information to public about environmental costs involved in particular project"...[17] Further, when relevant material has been withheld from an EIS, the courts have found that

> "Although EIS must generally be evaluated on present content, plaintiffs are entitled to show that relevant information has been omitted even though it was available, and plaintiffs may offer evidence to show that reasonable report reader with requisite expertise could not make independent judgment based on content of EIS...."[18]

Failure to adequately consider cumulative impacts:

The DEIS goes to great lengths in Appendix N to display the sorties allocated to each airspace under each alternative. However, the DEIS limits its consideration to F-16's and Army helicopters, and it does not adequately discuss the effects on noise and other environmental degradation of cumulative F-16 use. For example, one sortie to the Airburst Range may entail multiple passes over an area. This creates a cumulative effect that the DEIS does not attempt to account for. Further, the DEIS does not take into account the cumulative effects resulting from overlapping use by other military aircraft such as the C-130's from the reserve unit at Peterson AFB in Colorado Springs, Colorado. 28

The requirement for a detailed accounting of cumulative effects that would include the omissions mentioned above has been clearly stated by the courts: 29

> "Standards of practicability and reasonableness by which adequacy of EIS must be measured dictate that cumulative impact of one project with other projects....must not be ignored under 42 USCS § 4332; EIS must account for cumulative impact by providing (1) list of projects producing related or cumulative impact, (2) summary of expected environmental impacts to be produced by those projects

[17] Minnesota Public Interest Research Group v Butz (1976, CA8 Minn) 541 F2d 1292, 5 ELR 20736, cer den 430 US 922, 51 L Ed 2d 601, 97 S Ct 1340.
[18] Evans v Train (1978, SD Ohio) 460 F Supp 237.

Response to Comment No.28

The analyses in the EIS consider all aircraft projected to use the airspace and include many other aircraft than F-16s and helicopters.

Sortie numbers are an excellent means to determine potential overflights. MTRs are one-way traffic routes so an aircraft can pass over a single location only one time on one sortie. MOAs do allow an opportunity for multi-directional traffic; however, training objectives to vary the pilot's experiences during the sortie and fuel limitations of the aircraft would make repeat identical passes over one ground location an undesirable and unlikely training scenario.

The number of overpasses made on any one sortie in the La Veta MOA over a specific point on the ground is not predictable.

The aircraft referred to (C-130) are not required to schedule or use military special use airspace or military routes. To perform their missions, they may fly in the same manner as general aviation aircraft (e.g., Cessna, Beechcraft, etc.) since they are at a speed below 250 knots. As such, they may traverse anywhere within a flying radius of approximately 400 miles from the departure base.

The ANG is currently working with Peterson Air Force Base and other C-130 flying units to ensure their knowledge of noise sensitive areas in Colorado.

Response to Comment No.29

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

with specific reference to additional impact information where such information is available, and (3) reasonable analysis of combined or cumulative impact of all projects, including projects of agencies other than one which proposes project that is subject of EIS."[19] (Underline added)

Failure to provide adequate rationale for the proposed action:

The DEIS states that "as a result of opening the new Denver International Airport, the Denver Air Traffic Control Center determined that certain military training airspace in Colorado would have to be reconfigured in order to avoid conflicts with the new approach routes to the airport."[20] However, according to the DEIS, only about 10 percent of the ANG sorties "are directly and significantly impacted by limitations related to the Denver International Airport."[21]

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The DEIS uses "criteria for optimum training airspace." It also lists among its 'mandatory criteria' the requirement that "the proposed airspace must be close enough to Buckley Air National Guard Base to complete the maximum amount of training practicable and to minimize the cost of deploying."[22] These criteria are so narrow that they preclude a whole range of alternatives. Further, citing requirements for 'optimum' or 'maximum' performance rules out possible compromises in what is actually a political process based on compromise.

These kinds of criteria are clearly incompatible with the NEPA process. The courts have held that:

(1) "NEPA....does not permit agency to eliminate from discussion or consideration whole range of alternatives merely because they would achieve only some purposes of multi-purpose project; obviously, any genuine alternative to propose action will not fully accomplish all goals..."[23]

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[19] Akers v Resor (1978, WD Tenn) 443 F Supp 1355, 8 ELR 20388.
[20] Draft Environmental Impact Statement, Idaho Training Range, Op. Cit., p. vi.
[21] Ibid., p. 5.6.
[22] Ibid., p. xi.
[23] Mathews v United States Dept. of Transportation (1981, WD NC) 527 F SUPP 1055, 12 ELR 20345.

RESPONSES TO COMMENTS

Response to Comment No.30

The opening of the Denver International Airport resulted in the loss of approximately 40 percent of the New Raymer MOA and air traffic control assigned airspace. The impact on the existing Kit Carson MOA, combined with changes proposed under the CAI Preferred Alternative, would result in an overall decrease in the total military training airspace available.

Response to Comment No.31

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

(2) "Purposes of NEPA (42 USCS §§ 4321 et seq) are frustrated when considerations of alternatives and collateral effect are unreasonably constricted..."[24]

The courts have further held that "under 42 USCS § 4332, rule of reason requires agency to consider any alternative which is reasonable under circumstances;.."[25] The reduced sortie rates maintained by the Colorado Air National Guard in the La Veta MOA over the last five years are clearly a reasonable alternative: the reduced rates represent what the Guard is doing and what it was doing when it passed its Operational Readiness Inspection (ORI).[26]

The real issue here, and one that the DEIS never addresses, is the minimum the Air National Guard can live with, given the costs their actions levy on the citizens of Colorado. This is particularly true given the fact that the Guard is losing only 10 percent of its current sorties due to changed airspace requirements at DIA.

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Failure to Include Environmental Justice Section

Two years ago, Executive Order No. 12898, Feb. 11, 1994, 59 Fed. Reg. 7629, entitled, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations" was issued to federal agencies. This order requires that "...each federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low income populations...."[27]

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The order further stipulates that "in connection with the development and implementation of agency strategies...each Federal agency, whenever practicable and appropriate, shall collect, maintain and analyze information on the race, national origin, income level, and other readily accessible and appropriate information for areas surrounding

[24] Greene County Planning Board v Federal Power Com. (1976, CA2) 559 F2d 1227, 7 ELR 20101.
[25] Residents in Protest-I-35E v Dole (1984, DC Minn) 583 F Supp 653.
[26] Draft Environmental Impact Statement, Idaho Training Range, Op. Cit., p. 2.
[27] Executive Order No. 12898, Sec. 1-101, Feb. 11, 1994, 59 Fed. Reg. 7629.

Response to Comment No.32

A discussion on environmental justice has been added to the Final EIS. This new discussion may be found in Subsection 4.19. The concept of environmental justice addresses the issue of determining if actions of Federal agencies disproportionally impact the human health and environmental conditions in minority communities and low-income communities. The majority of the airspace associated with the alternatives addressed in the EIS has been in existence for many years and the changes being proposed would not significantly alter the current configuration. Environmental justice issues would be more relevant for new airspace, which occurs primarily in the southeastern portion of the State of Colorado. This new airspace does not affect any single minority group and overlies a wide variety of socioeconomic conditions.

facilities or sites expected to have a substantial environmental, human health, or economic effect on the surrounding populations...."[28]

Income($1000s)//County	COLORADO	ALAMOSA	CONEJOS	COSTILLA	CUSTER	HUERFANO	SAGUACHE
Total personal income	71,599,972	193,121	74,468	41,980	35,487	80,288	58,663
Nonfarm personal income	70,727,028	185,066	73,320	41,093	33,752	78,625	49,312
Farm income	872,944	8,055	1,148	887	1,735	1,663	9,351
Population (thousands)	3,465	14	7	3	2	6	5
Per capita personal income ($)	20,666	13,942	10,043	13,070	16,583	13,636	12,191

Source: Department of Commerce, REIS Data, 1993

Table 3
Per Capita Personal Income
Colorado and Effected Counties--1993

Table 3 shows that the counties affected by the CAI have much lower per capita income levels than the state of Colorado in general. And Table 1 showed that these counties lagged the state in many other important areas. The reason for this is obvious--these counties are isolated, rural, and, in general, lacking in the kinds of employment required to create high paying jobs. As a result, these counties clearly represent the kinds of low income areas where environmental justice issues are important. 33

The DEIS states that the rationale for the Colorado Airspace Initiative is the loss of sorties due to the relocation of Denver International Airport (DIA).[29] It further states that the National Guard has been impacted by Air Force budget cuts and downsizing, but that the Guard has decided to reduce rather than combine units[30]--even though combined units would be more efficient to operate and would save money. Finally, the DEIS states that keeping the Colorado ANG at Buckley is important because it is "supported by part time professional members of the local community."[31] Each of these rationales involves minimizing a cost for the Denver area, either by allowing DIA to operate freely or by retaining the Colorado Air National Guard in Denver where it contributes to the economy of the city. 34

[28] Ibid., Sec. 3-302(b), Feb. 11, 1994, 59 Fed. Reg. 7629.
[29] Draft Environmental Impact Statement, Op. Cit., p. 1-6.
[30] Ibid., p. 2-43.
[31] Ibid., p. 2-44.

RESPONSES TO COMMENTS

Response to Comment No. 33

See response to Comment No. 32.

Response to Comment No. 34

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

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Unfortunately, minimizing Denver's costs is accomplished in the CAI by cost shifting--a maneuver where the costs of Colorado Air National Guard operations are shifted from Denver and from the Air National Guard to citizens in the rest of Colorado. These citizens gain nothing from the economic advantages the Guard brings to Denver, but under the preferred alternative in the DEIS, they will be forced absorb all the noise and other costs of Guard operations in their regions. The fact that this cost shifting occurs, in the main, by taking costs from a high income area (Denver) and moving these costs to poorer, rural areas of the state makes the proposed alternatives included in this DEIS the rightful subject of an Environmental Justice review. 35

In this respect, the intent of Executive Order No. 12898 is unambiguous. An adequate Environmental Justice section must be added before a final EIS is released. 36

Failure to properly account for Aircraft Noise:

The National Guard claims that the areas in the Colorado Airspace Initiative will be used by F-16, F-111, B-1 and B-52 aircraft.[32] However, it appears the Air National Guard calculated its DNL noise levels using the F-16 only as opposed to the aircraft mix that will occur in the MOA.[33] The F-16 is shown in Appendix I to be quieter at each engine power setting than other potential users of the area. However, this is only one of many attempts in the DEIS to obfuscate the noise issue. The following sections provide a detailed analysis of the noise model that forms the heart of the DNL/annoyance analysis in the DEIS. This model comes from a 1978 study by Schultz that was then linked to a land use compatibility study which will be addressed in later sections of this paper. 37

Failure to properly generate the curve used in the 1978 Schultz study:

Appendix G of the DEIS acknowledges that the measurement of noise selected for the DEIS "has been criticized recently as not accurately representing community annoyance and land-use compatibility with aircraft noise."[34] The reason for this criticism is that the measurement of 38

[32] Ibid., p. v.
[33] Ibid., p. H-6.
[34] Draft Environmental Impact Statement, Op. Cit., p.3-7.

RESPONSES TO COMMENTS

Response to Comment No.35

The operation of the 140 WG out of Buckley Air National Guard Base in Aurora has an obvious economic impact for the immediate surrounding communities. In 1994, the payroll for the Colorado Air National Guard personnel stationed at Buckley exceeded $34 million and local expenditures, primarily contracting and purchasing, were almost $22 million. The State of Colorado collects property taxes from the men and women who work at Buckley and live in the community, and collects sales tax dollars from all purchases made within the State by ANG members. These revenue sources are a part of the general funds for the State which are distributed on a yearly basis by the General Assembly to every county in the State.

Response to Comment No.36

See response to Comment No. 32.

Response to Comment No.37

Noise calculations were based on the actual aircraft flown or projected to fly. F-16s were included to the extent that they use the airspace, as were all other aircraft types

Response to Comment No.38

The Schultz curve has been updated and validated several times since its original publication, and the current version has been included in the Final EIS. The most recent form, as presented by FICON, is based on several hundred data points, including a variety of noise sources. It has been demonstrated to be applicable to military aircraft noise in rural areas.

noise employed by the DEIS does not, in fact, fairly represent land use compatibility with aircraft noise--it represents, according to Schultz, the author of the study on which the DEIS analysis is based, community compatibility with transportation noise.

The 1978 study by Schultz that forms the heart of the DEIS analysis generated a 'synthesis' curve based on the noise surveys in Table 4.[35]

Study Area	Date
First Heathrow Aircraft	1961
French Aircraft	1966
Second Heathrow Aircraft	1967
Munich Aircraft	1969
Paris Street	1969
Swedish Aircraft	1972
Swiss Road	1972
London Street	1972
Swiss Aircraft	1973
French Railroad	1973
US Street	1974
Los Angeles International Airport	1973

Source: Schultz, Theodore, "Synthesis of Social Surveys on Noise Annoyance," Journal of the Acoustical Society of America, Vol. 64, 1978.

Table 4
Study Areas For The 1978 Schultz Paper

Using Schultz's study to analyze current military aircraft noise problems causes several important problems. First, this study mixed aircraft and non-aircraft noise--five of twelve studies covered only street or rail noise. Second, early aircraft studies mean that a greater proportion of the aircraft noise came from propeller driven, not jet aircraft. Third, the study covers urban communities. Thus, it does not adequately consider the noise differences associated with higher performance military aircraft and non-urban environments. And fourth, the 1973 study at Los Angeles International Airport had significantly higher annoyance ratings in the 55 to 75 DNL range than the rest of the studies in the Schultz paper.[36] These higher ratings are not accounted for by Schultz.

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[35] Schultz, Theodore, "Synthesis of Social Surveys on Noise Annoyance," Journal of the Acoustical Society of America, Vol. 64, 1978.

[36] Newman, J. Steven and Beattie, Kristy R., Aviation Noise Effects, Federal Aviation Administration, Office of Environment and Energy, Washington, DC, March, 1985, p. 28.

RESPONSES TO COMMENTS

Response to Comment No.39

The current Schultz curve is based on many more surveys then those shown in this table.

Response to Comment No.40

The current curve is based on more than twelve studies, and has been shown to be applicable to military aircraft noise.

Response to Comment No.41

Aircraft noise became a major problem with the introduction of jet aircraft. This was the impetus for performing community response studies on aircraft noise. By the 1960s and 1970s, jet aircraft were dominant at major civilian airports.

Response to Comment No.42

The Schultz curve has been shown to be applicable to suburban and rural populations, and to military aircraft. References are cited in the Final EIS.

Response to Comment No.43

As with any statistical study, some individual data points are higher than the mean and some lower. The Schultz curve represents the aggregate of current scientific knowledge on this topic.

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However, the 1978 Schultz paper had other problems. Kryter argued that Schultz's use of only those who were 'highly annoyed' missed large numbers of people who were also bothered by noise.[37] And it is apparent that Schultz's efforts to fit a 'synthesis curve' to his data were flawed both in the functional form chosen for the curve and in its failure to correct for the influence of 'outliers'--data points that exert undue influence on the model because they lie so far away from the majority of the data points.

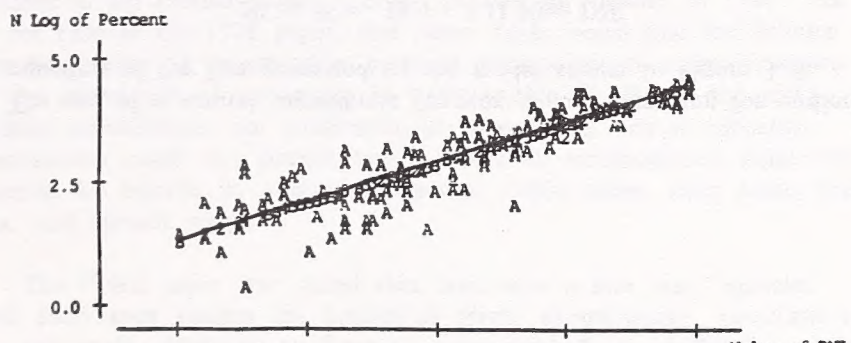
44

Page G-6 of the DEIS presents Schultz's data and his curve. A number of 'outlier points' lie along the horizontal axis, recording annoyance/DNL readings of 0/54, 0/61, 0/68, etc. These points deformed the curve and caused it to give lower annoyance readings in the 50 to 75 DNL range--precisely the range in which Schultz's own study underestimated the annoyance effects of Los Angeles International Airport.

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Schultz's inability to deal with these problems was partially due to the primitive methods of modeling available to him in the mid-1970s. There are now a number of possible methods for correctly fitting Schultz's curve to the data. Two of these are:

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Predictor	Coefficient	Stdev	t-ratio	p
Constant	-19.391	1.025	-18.91	0.000
Nlog DNL	5.3116	0.2421	21.94	0.000

Figure 1
Plot of Schultz's Data Using Natural Logarithms

[37] Kryter, Karl D., "Community Annoyance from Aircraft and Ground Vehicle Noise," Journal of the Acoustic Society of America, Vol. 72, No. 4, October, 1982.

RESPONSES TO COMMENTS

Response to Comment No.44

The purpose of the Schultz curve is to predict the number of people who are highly annoyed by noise. Schultz's selection analysis of those who were "highly annoyed" was appropriate for this purpose. This synthesis is, however, broader than might be thought. There is a range of individual responses at each noise level, and one might consider a three dimensional model rather than Schultz's two dimensional synthesis. A three dimensional model (which is beyond current technology) could be reduced to a two dimensional model by a weighted average or characteristic point in one of the three dimensions. Considering "highly annoyed" to be a characteristic point of the continuous annoyance distribution at a given sound level, Schultz's synthesis is equivalent to such a three-to-two dimension reduction. It therefore implicitly accounts for more than just highly annoyed respondents.

Response to Comment No.45

Outliers are part of most experimental results. It is improper to discard them without objective reasons. It was appropriate for Schultz to retain them in his analysis.

Response to Comment No.46

Logarithms and polynomials have been used for centuries, and were available to Schultz in 1975. Schultz used a function which was adequate within the range of the data he analyzed. Re-analysis with other functions have not yielded significantly different results in this range. The current form uses a logistic fit, whose single inflection point and constant asymptotic behavior makes it the model of choice within and beyond the data. A fifth degree fit (with its three inflection points) suggested in Figure 2 of the comment letter is not appropriate for this data, and is at odds with the current theory of annoyance. A simple linear fit, as suggested in Figure 5 of the comment letter, is also a poor choice.

A. The use of a natural logarithmic function while controlling for outliers. The equation of the line generated by the model shown in Figure 1 is

$$\text{NLog \%} = -19.4 + 5.31\ \text{Nlog DNL}.$$

Using this equation to calculate the percentage of people who are highly annoyed at the 65 DNL level that is regarded as an important cut-off point by this DEIS, we find that the Schultz curve underestimates the number of highly annoyed people at 65 DNL by about seven percent.

B. The use of advanced econometric methods involving higher powered functions.

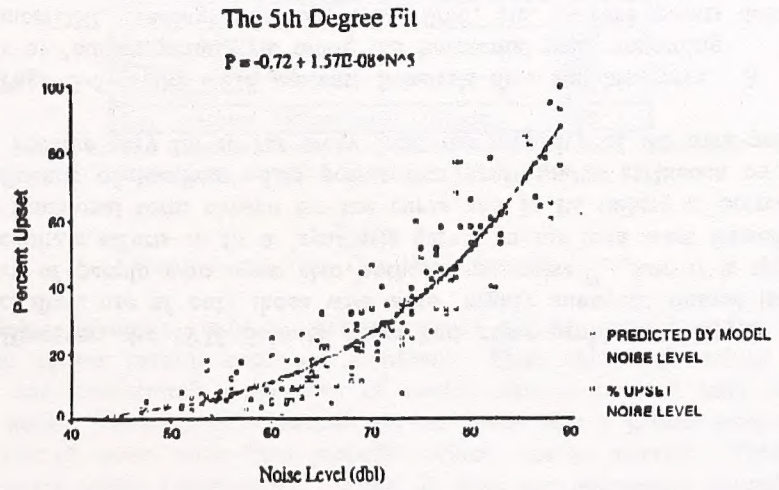


Figure 2
Plot of Schultz's Data Using a Higher Powered Function

Figure 2 shows the plot of this model. Both the statistics accompanying this model and an inspection of the curve itself show that the curve is a better fit of the data than the curve generated by Schultz. The equation for this model indicates that the Schultz curve

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continued

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underestimates the percentage of people who are highly annoyed at the 65 DNL level by about 13 percent.

Both of these models confirm what Schultz's own data for Los Angeles International Airport indicated--the Schultz curve underestimates the number of people who are highly annoyed with various aircraft DNL levels. Further, in a 1991 paper written by Schultz, Fidell, and Barber, Figures 14 and 15 show that Schultz's original curve systematically underestimated annoyance in the 50 to 75 decibel range.[38] However, these models and the two new models presented in this paper all use the 1978 Schultz data set and, thus, they are models of community transportation noise annoyance, not models of annoyance from aircraft noise. The 1978 Schultz model, the 1991 Fidell models, and both of the enhanced curve fitting models presented in this section are incorrectly specified to estimate aircraft noise because they include factors other than aircraft noise (auto, train and tram noise) in their data sets.

Failure to use the appropriate data to analyze aircraft noise:

In 1990, Schultz jointly authored a paper with Fidell and Barber updating his 1978 study. This paper, known as the Fidell paper, was published in the Journal of the Acoustic Society of America in 1991. As was the case in the 1978 paper, this paper again noted that the Schultz curve represents "a relationship between transportation noise exposure and the prevalence of annoyance in communities."[39] Hence, the study concerns communities, not wilderness or open space, and it concerns transportation noise, not aircraft noise. Data on transportation noise was generated by Schultz by averaging together traffic noise, tram noise, train noise, and aircraft noise.

The Fidell paper also stated that there was a fear that "agencies which fund such studies [as Schultz's] might **erroneously conclude that the synthesis [Schultz's Curve] represented a definitive solution** to many of the problems assessing effects of noise exposure on communities." [Emphasis added.] The paper then compared Schultz's

[38] Fidell, Sanford, Barber, David, S. and Schultz, Theodore, "Updating a dosage-effect relationship for the prevalence of annoyance due to general transportation noise." Journal of the Acoustic Society Of America, Vol. 89, No. 1, January 1991, p. 230, 231.
[39] Ibid., p. 221.

RESPONSES TO COMMENTS

Response to Comment No.47

The various studies cited to demonstrate the variability in reaction to noise, and the challenges associated with reconciling studies performed by different independent researchers. Detailed points such as those presented in the comment letter were considered by the authors of the FICON report and its supporting documents. The final form of the Schultz curve represents interpretation of these data by the scientific community, and is the result which is currently considered to be the best information available.

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original curve with 15 new studies, all of which were completed after Schultz's original research. These studies are shown in Table 5:

Name	Author/Date	Data points
1. US Airbase	Borsky/1985	25
2. Antwerp Street	Myncke et al./1977	31
3. Brussels Street	Myncke et al./1977	23
4. Burbank Airport	Fidell et al./1985	20
5. Canadian Road	Hall and Taylor/1977	14
6. Danish Street	Relster/1975	28
7. British Rail	Fields and Walker/1982	11
8. Aircraft/Traffic	Hall et al./1977	21
9. Orange Co. Airport	Fidell et al./1985	12
10. Australian Aircraft	Hede and Bullen/1982	42
11. Tramway/Traffic	Rylander/1977	12
12. Decatur Airport	Schomer/1983	4
13. Swedish Railroad	Sorensen and Hammar/1983	15
14. Westchester Airport	Fidell et al./1985	8
15. Danish Railroad	Andersen et al./1982	26

Source: Fidell, Sanford, Barber, David, S. and Schultz, Theodore, "Updating a dosage-effect relationship for the prevalence of annoyance due to general transportation noise," Journal of the Acoustic Society Of America, Vol. 89, No. 1, January 1991, p. 224.

Table 5
Updated Studies On Transportation Noise

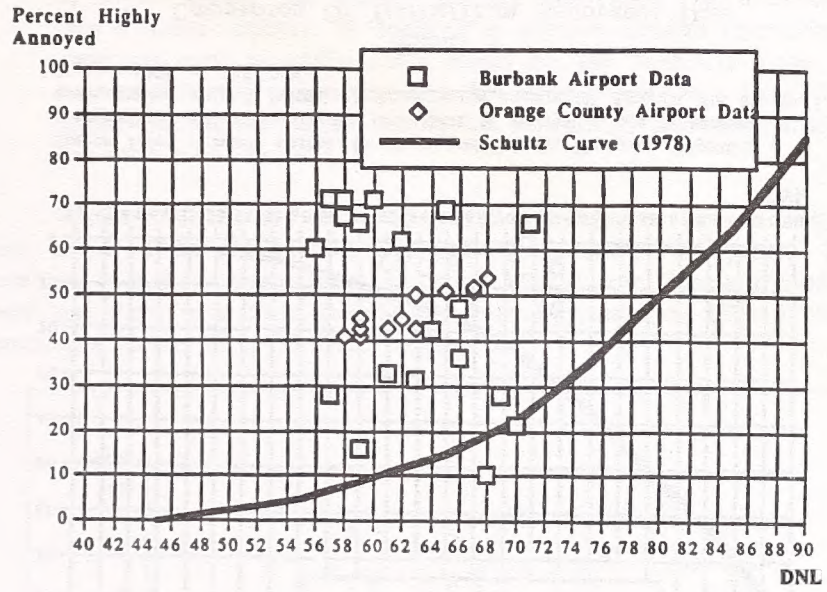
These new studies cover (with one exception) either aircraft noise or ground transportation noise, but not both. Figure 3 compares two representative aircraft noise/annoyance data sets from the 1991 Fidell paper with the 1978 Schultz curve while Figure 4 compares two representative tram/traffic noise/annoyance data sets from the same paper with the 1978 Schultz curve. Each of the new studies in the Fidell paper yields the same results: annoyance with aircraft noise is consistently higher than the 1978 Schultz curve forecasts while annoyance with road, tram and railway noise is consistently below that indicated by the curve. Only when the studies on aircraft noise are combined with those on road, tram and rail noise is the Schultz curve approximated.[40] This creates the illogical premise on which using the Schultz model to analyze aircraft noise data is based: auto, tram and railroad noise depress the annoyance levels of aircraft noise. This is analogous to claiming that someone who is highly

[40] Ibid., p. 221-233.

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continued

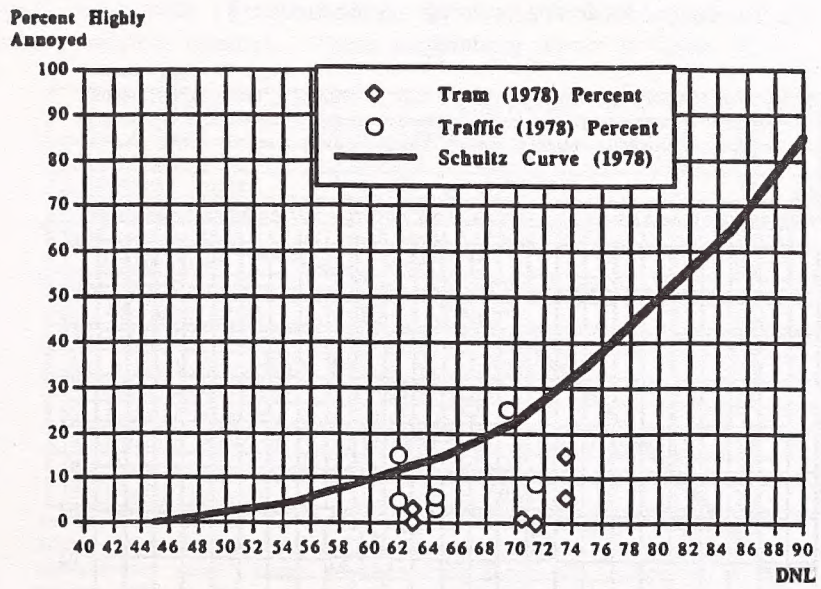
annoyed at a given level of aircraft noise will become less annoyed if additional noise is created by automobiles, trains or trams.



Source: Fidell, Sanford, Barber, David, S. and Schultz, Theodore, "Updating a dosage-effect relationship for the prevalence of annoyance due to general transportation noise," Journal of the Acoustic Society Of America, Vol. 89, No. 1, January 1991, p. 224.

Figure 3
Comparison Of Aircraft Annoyance Data
To Schultz Curve (1978)

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continued



Source: Fidell, Sanford, Barber, David, S. and Schultz, Theodore, "Updating a dosage-effect relationship for the prevalence of annoyance due to general transportation noise," Journal of the Acoustic Society Of America, Vol. 89, No. 1, January 1991, p. 225, 226.

Figure 4
Comparison Of Traffic/Tram Annoyance Data
To Schultz Curve (1978)

Data for all 15 studies in Table 5 were included in the 1991 Fidell paper. Using data from studies 1, 4, 8, 9, 10, 12, and 14, this author constructed a new percent highly annoyed/DNL graph for aircraft noise alone. The rationale for building (and using) this new curve is as follows:

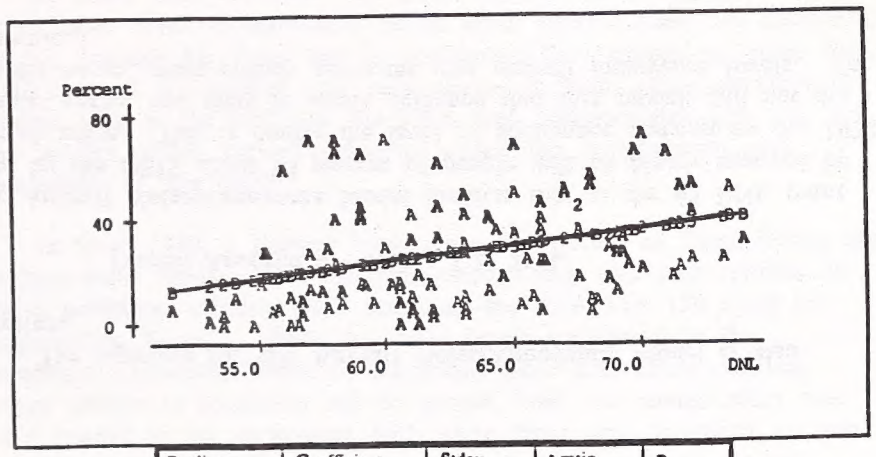
1. It is logical that a study such as this DEIS, which purports to investigate the effects of aircraft noise, would base its investigative model on aircraft noise, not on train, tram or auto noise.
2. Other noise researchers have found that aircraft noise is significantly more disturbing than train, tram or auto noise:

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continued

a. Grandjean, in a Swiss study, found it took a DNL of 10 to 15 dB higher for road traffic noise to cause an equal disturbance to aircraft noise.[41]

b. Kryter argued that because aircraft noise falls over a structure, like a house, equally, as opposed to passing through interfering structures such as traffic noise would do, the "effective noise exposure" would be greater than that of traffic noise. Thus, Kryter found that aircraft noise should be considered separately from other transportation noise.[42]

Figure 5 shows the result of modeling annoyance with aircraft noise only based on the data in Fidell, Barber and Schultz's 1991 paper. The resulting model is simpler and also more logical than Schultz's model--it says that there is a direct relationship between increasing DNL levels and annoyance in the 50 to 75 DNL range.



Predictor	Coefficient	Stdev	t-ratio	p
Constant	-50.34	20.62	-2.44	0.016
DNL	1.2343	0.3273	3.77	0.000

Figure 5
Aircraft Noise/Annoyance Model Using Aircraft Data Only

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continued

[41] Grandjean, A., Graf, P, Lauber, A., Meier, H.P., and Muller, R., "Survey on the Effects of Aircraft Noise in Switzerland," Inter-Noise 76, Washington, DC, April, 1976.
[42] Kryter, Op. Cit.

The equation for this Aircraft Noise/Annoyance Model is also simpler:

Percent Annoyed = - 50.3 + 1.23 DNL

The Aircraft Noise/Annoyance Model predicts that at the 65 DNL point used by the DEIS about 30 percent of people will be highly annoyed by aircraft noise. This is double the level of annoyance forecast by the 1978 Schultz curve, and there is ample evidence that this model, and not the Schultz curve, more closely estimates true aircraft annoyance levels. For example:

(1) A 1988 court case involved an Air Force estimate, based on the Schultz curve, that 700 people around Westover Air Force Base would be highly annoyed by aircraft noise. A local group gathered the signatures of 1535 citizens who were highly annoyed--more than double the amount the Schultz curve forecast, but close to the number the aircraft annoyance model generated in this paper would predict.[43]

(2) von Gierke, in a paper done in 1973 for the EPA, showed Aircraft Noise/Annoyance levels that agree with the Aircraft Noise/Annoyance Model and are roughly twice as high as those predicted by the Schultz curve.[44]

(3) A 1975 paper by Fidell and Jones developed a curve for aircraft annoyance at Los Angeles International Airport that shows about thirty percent of the respondents were highly annoyed at a DNL of 65.[45] The rest of this curve also agrees closely with the Aircraft Noise/Annoyance Model developed above.

(4) Hall, Birnie, Taylor and Palmer, in a 1981 paper, showed that the percentage of those highly annoyed with aircraft noise was higher than that for "grouped road traffic data" at every DNL level. Further, the authors stated that "On the basis of the preceding discussion, only one

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continued

[43] Valley Citizens for a Safe Environment v Aldridge (1988 DC Mass) 695 F Supp 605, 19 ELR 20497.
[44] von Gierke, H., "Impact Characterization of Noise Including Implications of Identifying and Achieving Levels of Community Noise Exposure," US Environmental Protection Agency, NTID 73.4, Washington, DC, 1973, p.31.
[45] Fidell, S. and Jones, G., "Effects of Cessation of Late-Night Flights on an Airport Community, Journal of Sound and Vibration, Vol. 42, No. 4., 1975, p. 422.

conclusion appears possible: There is a difference between the community responses to aircraft noise and to road traffic noise when each is measured by L_{dn}. For the same noise level, a greater percentage of people are highly annoyed by aircraft noise. The difference in annoyance at the two sources is not constant, but instead, increases as L_{dn} increases."[46]

(5) In a 1985 paper, Fidell, Horonjeff, Mills, Baldwin, Teffeteller and Pearsons found short term annoyance and long term annoyance with aircraft noise were both significantly higher than that forecast by the 1978 Schultz curve. These authors state that "The prevalence of aircraft noise-induced annoyance was assessed at three mixed-use airports in a total 40 neighborhood/interviewing rounds. Dosage-response relationships for these data do not agree well with that synthesized by Schultz for general transportation noise."[47]

In short, there has been abundant evidence for the last twenty years that a higher level of annoyance exists when aircraft alone are considered. The fact that the Air Force and its contractors have chosen to ignore this possibility and the studies that demonstrate it when other government agencies, such as the EPA and the FAA have acknowledged and used the same studies, raises serious questions about the thoroughness and unbiasedness of this DEIS.

In June, 1980, a Federal Interagency Committee on Urban Noise used Schultz's curve linking DNL and annoyance, along with other studies, to publish guidelines relating DNL and land--the FAA Part 150 Land Use Compatibility Table.[48] Since the sound levels considered by the Interagency Committee were, in the main, those that cause physical damage neither to structures nor to people, land use compatibility was linked instead to the annoyance with noise those who inhabited the land would experience. As Table 6 shows, the divisions between the six DNL/land use columns confirms the importance of annoyance in

[46] Hall, Fred L., Birnie, Susan E., Taylor, S. Martin, and Palmer, John E., "Direct Comparison of Community Response to Road Traffic Noise and to Aircraft Noise." Journal of the Acoustic Society of America, Vol. 70, No. 6, December, 1981, pp. 1693, 1697.

[47] Fidell, Sanford, Horonjeff, Richard, Mills, John, Baldwin, Edward, Teffeteller, Sherri, and Pearsons, Karl, "Aircraft Noise Annoyance and Three Joint Air Carrier and General Aviaion Airports," Journal of the Acoustic Society of America, Vol. 77, No. 3, March, 1985, pp. 1060, 1066.

[48] Draft Environmental Impact Statement, Op. Cit., P. G-9.

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RESPONSES TO COMMENTS

Response to Comment No.48

Comment noted. Ldn of 65, with approximately 15 percent highly annoyed, is a single criterion which has been widely used in the past. The use of a single 65 dB criterion has been dropped from the Final EIS. The impact in each area is now evaluated on an individual basis.

establishing the breaks between the columns of compatible activities--each of the breaks is at a logical increment of increased annoyance and each (with the exception of the 65-70 column which represents a 50% annoyance increase from the previous column) is denominated in tens or fives:

Column DNL Range	Percent Annoyed--Start of Next Land Use Category
Less than 65	15
65-70	22.5
70-75	35
75-80	50
80-85	65
Over 85	100

Source: Draft Environmental Impact Statement for the Colorado Airspace Initiative, Air National Guard, National Guard Bureau, Andrews Air Force Base, Maryland, March, 1996, p. G-6, 9.

Table 6
Linkages Between Annoyance
DNL and Land Use Compatibility

Given this relationship between annoyance and land use, it is possible to apply the results of the Aircraft Noise/Annoyance Model developed above to the land use compatibility table. For example, at the DNL level of 65 used by the Colorado Air National Guard as a major reference point, the Aircraft Noise/Annoyance Model predicts that about 30 percent of people will be annoyed. This corresponds to land use compatibility category 3, where residential use should not be attempted and where schools, outdoor amphitheaters, and nature exhibits and zoos should not be built. The use of airspace in the Wet Mountain Valley would be impossible at a DNL of 65 given these standards. The Aircraft Noise/Annoyance Model can also be used within the range of data on which it is based to develop the DNL levels that should be associated with land use compatibility categories.

Table 7 shows that the land use compatibility category chosen by the Colorado Air National Guard--less than 65 DNL--corresponds to an annoyance level of 15 percent highly annoyed. This, in turn, corresponds to a 53 DNL level when aircraft noise alone is considered. Based on the summary of continuous noise monitoring presented in Table H-4 of the

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313L William J. Weida

Column DNL Range Schultz Curve	Column DNL Range Aircraft Noise/Annoyance Model	Percent Annoyed--Start of Next Land Use Category
Less than 65	Less than 53	15
65-70	53-59	22.5
70-75	59-69	35

Table 7
Comparison Of DNL Ranges for
Schultz Model and Aircraft Noise/Annoyance Model

DEIS, this DNL was equaled or exceeded at ten of the seventeen monitoring sites.[49] And based on DEIS Table 4-47, maximum cumulative noise levels would equal or exceed the 53 level in 12 out of the 20 MOAs and MTRs.[50] This demonstrates conclusively that the kinds of operations proposed by the Colorado Air National Guard are incompatible with column one of the FAA Part 150 Land Use Compatibility Table guidelines and the annoyance levels (15 percent highly annoyed) specified by the Air Force in their use of this table.

This section has demonstrated that it is possible to build an aircraft noise annoyance model that is not degraded by the inclusion of other, irrelevant data. However, the Aircraft Noise/Annoyance Model developed in this section still includes one major weakness: it is based on data that were collected in various urban settings. Thus, this model is most appropriately used to determine annoyance of urban populations with aircraft noise. As the following section will demonstrate, data on annoyance with urban noise considerably understates the levels of annoyance experienced in a wilderness setting.

Failure to consider the difference between urban and rural/wilderness conditions:

Although the Colorado Airspace Initiative will have a major impact on many wilderness areas throughout the state, the DEIS is strangely silent on the likely impacts of aircraft noise on wilderness users and inhabitants. Appendix G of the DEIS attempts to justify the compatibility of aircraft

[49] Ibid., p. H-20.
[50] Ibid., p.4-93.

noise and recreation activities by citing the FAA land-use compatibility guidelines. However, these guidelines often assume that individuals are protected from the ambient sound environment by buildings that lower the dB levels to the 20dB to 35dB range.[51] Obviously, these figures were never meant to apply to someone in the wilderness who suddenly encounters aircraft noise. This is substantiated by reference to the source document cited by the DEIS which is from the Federal Interagency Committee on Urban Noise.[52]

Similarly, neither the 1978 Schultz paper nor the 1991 Fidell, Barber and Schultz paper, apply to wilderness noise experiences. Tables 4 and 5 and references in Fidell show that all the data for both papers were gathered in urban locations. The DEIS itself states on numerous occasions that the data it uses depict "the noise impact in airport communities..." or on communities in general.[53] Obviously, inclusion of this kind of inapplicable data in an argument about wilderness noise only serves to obfuscate the real issues of individual reactions to individual occurrences in an isolated setting.

That urban noise data do not apply to wilderness noise problems is both common sense and common knowledge. This was confirmed in a recent Forest Service study that suggests that persons in wilderness settings are at least ten times more sensitive to aircraft noise than those in urban settings.[54] Based on the noise calculations in the DEIS, this level of increased sensitivity would require an addition of approximately a 30 dB penalty beyond the levels calculated by the Aircraft Noise/Annoyance Model in the previous section.

The Forest Service also found that "low-altitude, high-speed aircraft, such as those operating along MTR's, were reported as the most annoying type of aircraft to hear or see [and].....annoyance associated with over flights was more strongly related to noise exposure than to the visibility of

[51]See footnotes for Table G-1, Draft Environmental Impact Statement, Op. Cit., p. G-9.
[52]For a fuller explanation of the original data from this document, see Air National Guard Readiness Center, Environmental Assessment of the Effects of the Conversion of the 140th Fighter Wing Along IR-409 and at the Airburst Range, Colorado, Washington, DC, November, 1992, p. 3-22.
[53]Draft Environmental Impact Statement, Op. Cit., P. G-8.
[54]Potential Impacts of Aircraft Over flights of National Forest System Wildernesses, United States Department of Agriculture, Forest Service, January, 1992, p. 2-21.

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RESPONSES TO COMMENTS

Response to Comment No.49

In the Final EIS, noise impact is assessed on the basis of the noise level in each area. Factors such as those cited are considered as appropriate.

313L William J. Weida

aircraft..."[55] And a recent Draft Environmental Impact Statement by the Air National Guard for the Idaho Training Range recognized that urban data did not approximate a wilderness experience, admitting that "this situation [noise occurrence in wilderness] differs from most community noise environments, which tend to be continuous or patterned."[56]

Another major problem in experiencing noise in wilderness conditions is the 'surprise effect' that occurs from the rapid onset and loud noise of an aircraft operating at high speeds and low altitudes. The current practice is to "adjust" noise figures to account for this noise onset rate as follows: for a noise onset rate "of between 15 and 30 dB per second, an adjustment penalty ranging from 0 to 5 dB is added to the normal Sound Exposure Level." For rates above 30dB, an adjustment of 5 dB is added to the normal Sound Exposure Level.[57] In other words, 'adjustments' for onset noise only increase up to 30dB of onset noise, and no onset noise increases over 30dB are accounted for -- even though the dB scale is logarithmic. This means that an aircraft with an onset noise of 100dB would receive the same "penalty" as one with an onset noise of 30 dB, even though it is 250 times as loud. This clearly has little relevance to the actual noise onset levels someone in the wilderness would experience.

Because they represent the urban noise annoyance generated by aircraft operations, even the annoyance figures derived from the Aircraft Noise/Annoyance Model developed in the previous section still seriously understate the impact of noise on wilderness activities. The Colorado Air National Guard is reminded that the courts have held that "all federal agencies must consider environmental issues as they consider other matters within their mandates, even though resolution of such issues may be outside agency's jurisdiction."[58] Further, the courts have also held that "mere admission in EIS that proposed actions will have adverse impact, without detail concerning scope or extent of impact or weighing of environmental benefits versus economic costs, does not comply with mandate of 42 USCS § 4332."[59] In order to satisfy NEPA requirements to fully disclose the environmental effects on wilderness of the Guard's proposed activities, the Colorado Air National Guard must develop an

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[55] Draft Environmental Impact Statement, Idaho Training Range, Op. Cit., p.3-252.
[56] Ibid., p. F-8.
[57] Draft Environmental Impact Statement, Op. Cit., p. G-7.
[58] Municipal Intervenors Group v Federal Power Com. (1972) 153 App DC 373, 473 F2d 84.
[59] California v Bergland (1980, ED Cal) 483 F Supp 465, 10 ELR 20098.

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RESPONSES TO COMMENTS

Response to Comment No.50

The noise assessment methodology used in the EIS represents the best available technology, and is supported by the scientific community. The Guard is using this state-of-the-art technology to ensure that it will satisfy both the letter and the spirit of the requirements. When flying over wilderness areas, special minimum altitude rules (detailed in the EIS) will be applied so as to minimize noise impact.

Response to Comment No.51

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

accurate indication of the damage its activities will cause to wilderness areas and uses before it issues the final EIS on this proposal.

Conclusion:

This DEIS has used every means available to present a one-sided and misleading picture of the effect of aircraft noise on citizens in the rural areas affected by the Colorado Airspace Initiative. In spite of this, it is abundantly clear that in the rural and wilderness areas of Colorado that underlie the various MOAs proposed by the Colorado Air National Guard, aircraft noise will be a major problem. The economic implications of this could be severe. Tourism and travel are major contributors to the economies of many of the counties over which the CAI will operate. Tourist services have some of the highest job creation potential of any economic activity in the state: every million dollars spent on tourist services generates 42 to 57 jobs in Colorado.[60]

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The review has identified eleven major areas where the DEIS has failed to consider costs and impacts that are clearly mandated by NEPA and by court decisions regarding the implementation of NEPA. Those who have been responsible for preparing this document would do well to review Lathan v Brinegar (1974, CA9 Wash) 506 F2d 677, 4 ELR 20802, where the court held that "circulation of grossly inadequate statement as draft of new EIS conceivably frustrates goal of obtaining informed agency and public comment on environmental consequences of proposed project, and in some circumstances amounts to violation of responsible agency's duty under 42 USCS § 4332(2)(b)."[61]

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[60] Regional Multipliers -- RIMS II, U. S. Department of Commerce, May, 1992, p. 8.
[61] Lathan v Brinegar (1974, CA9 Wash) 506 F2d 677, 4 ELR 20802.

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RESPONSES TO COMMENTS

Response to Comment No.52

Under the Preferred Alternative, the maximum number of sorties for the Colorado Airspace Initiative would decrease from 5,441 sorties to 4,909 sorties per year.

Response to Comment No.53

The role of tourism in the local economy, and its impact from the alternatives associated with the CAI, have been studied in the EIS as a part of the evaluation of socioeconomic impacts. There are a number of factors, other than aircraft operations, that may affect tourism and the use of recreational areas, including weather, the proximity of other attractions in the area, and the economy. While it is possible that a tourist visiting an area may find an aircraft overflight to be annoying, no significant change to the tourist industry would be expected considering the fact that the majority of the CAI airspace has existed for many years and the relevant influences from military aircraft operations are not changing in the study area. The contribution of tourism earnings to total industry earnings was presented in the EIS for each airspace. In all instances, these values were very consistent with overall state levels of tourism earnings as compared to industry earnings.

Response to Comment No.54

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

313L William J. Welda

Roberto and Susan Breda
12606 Pleasant Grove Rd.
Cypress, TX 77429-2247

May 5, 1996

Custer County Action Association,

We recently (1 year) purchased 35 acres in the beautiful, peaceful Wet Mountain Valley. The reason we purchased in this area is the beauty, but the major reason is the peace and quiet. We live and work in Houston, Texas. If we wanted the din of low-flying aircraft we have 2 airports

1

RESPONSES TO COMMENTS

Response to Comment No.1

There would be some changes in sortie numbers, noise levels, and airspace dimensions under the Original Proposal and the Preferred Alternative addressed in the EIS. However, overall flying hours of the 140 WG will be reduced from 5005 hours to 4600 hours. When compared to existing military aircraft training in the study area, these changes would not change the current levels of solitude and peace and quiet experienced by residents. As under current conditions, noise from military aircraft operations may periodically disturb citizens and affect their enjoyment of solitude; however, opportunities for abundant periods of total peace and quiet would continue as under present conditions.

Response to Comment No.2

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

we could have purchased land near.

We have not yet had the privilege to be full time residents of Westcliffe. We are sending our voices of no to the CAI and MOA change that is proposed for our county.

Thank you for listening to our voices.

Sincerely,

Susan Reed

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2080

4005 Wakefield Drive
Colorado Springs, CO 80906
May 5, 1996

To Whom it May Concern:

"We are too good to make war our most successful enterprise."
Mario Cuomo

Many others have written about the environmental aspects of the fly-overs. They mention the effect on domestic animals, wild animals, people, and tourism. We ourselves have also written. The sentiment is virtually unanimous. Why then does the military ignore our wishes and continue to try to expand the area and the number of fly-overs? Let us examine this question.

"The vital interests of the United States are not threatened by any enemy, now or in the foreseeable future. Why, then, does the American public allow its representatives to overfeed the sacred military cow?" Center for Defense Information, Volume XXV, Number 2. 1

It is not about danger, it is not about jobs, it is not about security, it is partly about politics, and it is almost entirely about the power of the "Military Industrial Complex". Installations for war-making weapons are located in nearly every state--partly to insure that most congressmen and senators will wish to retain them. Military spending costs the U.S. more than $260 Billion per year, and the Congress appropriated $7 billion more than the pentagon asked for. Continued military-related jobs forces budget cutting for superior job-creating civilian activities. 2

Let us then concentrate on FEWER fly-overs, and LESS air-space devoted to unneeded activities. Let the people have a say--is this not supposed to be a democracy? Let us not be confused and misled by a military-industrial cabal. 3

Sincerely yours,

Clement L Markert
Margaret Markert

RESPONSES TO COMMENTS

Response to Comment No.1

Training for potential military conflict in time of peace is a reality recognized by the Congress and the President. As military forces are cut back, the quality of training for existing forces must be maintained and improved to ensure our nation has an effective military. As the active duty military force is reduced in size, the ANG role and the role of the 140 WG in the total force structure is increasing. Over the past several years, the DOD has conducted studies to evaluate mission readiness and cost effectiveness of its total force. In comparison to DOD regular components, the ANG has relatively low operating costs and provides a cost effective investment.

Response to Comment No.2

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.3

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Carol J Maza
28W562 Schleck Rd
Bartlett, Ill. 60103
May 6, 1996

Harry Knudsen, Jr.
Planning Branch
Air Natl Guard Env. Div.

Dear Sir:

As a property owner in Verde Creek, I am much opposed to the flights over this land. Simply put, the air force has enough open air space. To start flying over this area with its inhabitants, human and animal is just not necessary, and will be detrimental. Please consider other options. Finding peace in the valley is not an easy matter and keeping it is even harder now a days. 1

Thank you for your consideration.

Carol J Maza

RESPONSES TO COMMENTS

Response to Comment No.1

The use of other training areas was examined as part of the development of the alternatives studied in detail in the EIS in Subsection 2.3. The proposal was designed to minimize conflicts with potentially sensitive areas while providing the training resources necessary to meet military readiness requirements. Specific narrowing criteria for the selection of military training airspace (see Subsection 2.3.3 in Volume I) were used to evaluate other locations, and no alternative training areas were identified that could be substituted for the airspace configuration proposed in the alternatives studied in the EIS.

The primary user of the airspace included in the Colorado Airspace Initiative is the 140 WG based at Buckley Air National Guard Base in Aurora, Colorado. Because of limited resources and aeronautical constraints, virtually all of our nation's fighter units train in airspace that is within a "tank of gas" of the aircrews' base.

5/6/96

Dear Sir

I wish to voice my opposition to the plans to have low level flights over Custer Co + the entire valley. The Natl. Guard has never proven that these flights are necessary or needed. plus the air force has enough air space that they already use in the U.S. I bought property in the Valley to live peacefully with nature and the animals not to be disturbed on a regular basis. I sincerly hope you can find another alternative. Thank you

Carl Porcaro

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2

RESPONSES TO COMMENTS

Response to Comment No.1

The Colorado Airspace Initiative is not an expansion of airspace, but rather a modification. In many cases, this modification actually results in a reduction of airspace and/or number of sorties flown. The need for the Colorado Airspace Initiative is presented in Subsection 1.3 of the EIS.

Response to Comment No.2

There would be some changes in sortie numbers, noise levels, and airspace dimensions under the Original Proposal and the Preferred Alternative addressed in the EIS. However, overall flying hours of the 140 WG will be reduced from 5005 hours to 4600 hours. When compared to existing military aircraft training in the study area, these changes would not change the current levels of solitude and peace and quiet experienced by residents. As under current conditions, noise from military aircraft operations may periodically disturb citizens and affect their enjoyment of solitude; however, opportunities for abundant periods of total peace and quiet would continue as under present conditions.

COLORADO SPRINGS CARDIOLOGISTS, P.C.
DIAGNOSTIC AND INTERVENTIONAL CARDIOLOGY
25 E. JACKSON, SUITE 301
COLORADO SPRINGS, COLORADO 80907

TELEPHONE (719) 634-6671
FAX (719) 634-2840

DILWORTH P. SELLERS, M.D., F.A.C.C.
RICHARD W. MOOTHART, M.D., F.A.C.C.
JOHN P. KLEINER, M.D., F.A.C.C.

ROBERT A. CADIGAN, M.D., F.A.C.C.
DEBORAH A. JALOWIEC, M.D., F.A.C.C.
MICHAEL J. BARBER, M.D., Ph.D., F.A.C.C.

May 6, 1996

RE: LOW LEVEL AIRCRAFT IN THE WET MOUNTAIN VALLEY

TO WHOM IT MAY CONCERN:

My wife and I often hike and bike in the Wet Mountain Valley near Westcliffe, Colorado. This is a wonderful recreational area and one of the most beautiful valleys in Colorado.

We are very opposed to the low flying military aircraft over the Wet Mountain Valley. We feel that this is very disturbing to this beautiful agricultural and recreational area. 1

Sincerely,

D. P. Sellers, M.D.

DPS/kl

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RESPONSES TO COMMENTS

Response to Comment No.1

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

session stirs up emotions

by Karen L. Stewart

LA JUNTA — Communication was the top item on the agenda May 8 at the second of seven Colorado Airspace Initiative public hearings. "We want the ranchers to know and understand we are aware of the concerns and issues related to domestic animals and wildlife," said Dick Masey, Air National Guard domestic and wildlife expert. "We are concerned with the impact on the day-to-day living in those areas."

The issue was not without opposition with verbal protests presented by area residents. "We are very opposed to more flights," said Kimmie Lewis of Muddy Valley Ranch south of La Junta. "They (the cows) run through fences... they hit those

See "Airspace" on page 10

Airspace

continued from page 1

fences and get broken legs... they get injured."

Lewis' frustration did not end with the impact on the animals. "We can pay the taxes, we can raise the beef you buy in Safeway, we can pay the bills, but when is it going to stop? All these regulations that are imposed upon us... when is it going to be enough?"

The formal review and comment period began March 29, 1996, and will conclude June 5 after which time the Air National Guard will continue to respond to all public comment during the environmental impact statement process.

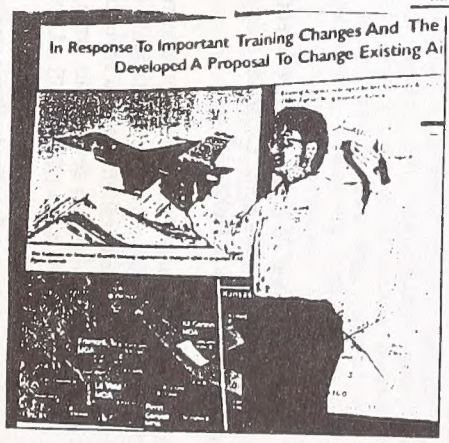
Born out of the training needs of the Colorado Air National Guard's Buckley base, Kit Carson military operations and air rerouting for Denver International Airport, the report has been in progress more than two years.

Arkansas Valley Journal

"Focusing on Agriculture In Colorado and Adjacent States Since 1949"

Vol. 49 No. 11 Thursday, May 16, 1996 50¢ Per Copy

— MAY 16, 1996



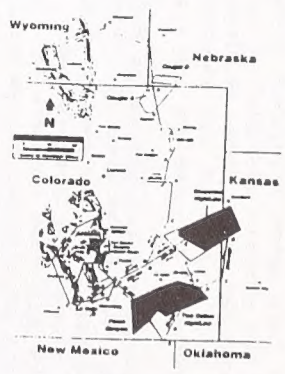
"The Air National Guard has modified the first proposal into a preferred alternative based on the public comment collected," said Steve Wolfe, Air National Guard environmental programs chief of public affairs. "This thing has had a lot of input from the community and elected officials. The citizens of Colorado have helped us rewrite our proposal and we are able to account for about 98 percent of the citizen's concerns."

The Air National Guard expressed hope that a compromise will be acceptable to both the land owners and training requirements. "We take a lot of pain trying to determine where to do this," said Masey. "Hopefully it melts down to something that works for everybody."

Additional public meetings will be 5-10 p.m. on May 21 at the Cheyenne County fairgrounds community building in Cheyenne Wells and May 22 at Rangeview High School in Aurora.

To obtain a copy of the Draft Environmental Impact Statement or to submit written comments, write Air National Guard Readiness Center, Program Manager, CAI-EIS, ANGRC/CEVP, 3500 Fetchet Ave. Andrews AFB Md 20762.

STEVE WOLF, an Air National Guard official from Washington, D.C., explained the proposed changes which will impact airspace in Colorado during the Colorado Airspace Initiative public hearing May 8 in La Junta. At right, a prefered alternative airspace map details the new or modified military operation areas in gray shading.





Photos by Karen L. Stewart

KIMMIE LEWIS of Muddy Valley Ranch south of La Junta, presented a verbal protest during the airspace hearing.

386 San Miguel
Westcliffe, CO 81252
719-783-2690
May 7, 1996

Public Comments
Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Ave.
Andrews Air Force Base
MD 20762-5157

Dear Program Manager:

I have received your DEIS. It is not adequate. It is not an **environmental** impact statement. How could it be, when you have ignored my 1995 book, *Colorado's Sangre de Cristo Mountains*, published by the University Press of Colorado?

My book is the definitive environmental history of the area you purport to be studying. Your ignorance of this work and its conclusions leads me to one conclusion: I oppose your plans in any form, and I will continue to do so until you demonstrate that you have some sense of the environmental values in our area. But then when you develop that sense, you will come to the same conclusion as the rest of us: **GO AWAY AND LEAVE US ALONE!** 1

Under separate cover, I am sending you a copy of my book. Your staff should study it closely.

Yours,

Dr. Thomas J. Wolf, Ph.D.
Adjunct Professor, Southwest Studies
Colorado College

c: National Airspace Coalition

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RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted. Subject book was never received by the ANG.

To: Air National Guard Readiness Center
Program Manager CAI EIS
3500 Fetchet Avenue
Andrews A.F.B., MD. 20762-5157

From: David Waddington
11764 Nob Way
Golden, Colo. 40403

Subj: Draft Environmental Impact Statement
for the Colorado Airspace Initiative
March 1966

Date: 8 May 1996

1. My home, where I own property and visit periodically is in the Wet Mountain Valley about 9 miles northwest of Westcliffe at an elevation of 8900 feet in the foot of the Sangre De Christo Mountains.

2. First, let me congratulate you on the elimination of VR-412 which would have run through the whole length of the Wet Mountain Valley.

3. I approve of the "approved Alternative" narrowing the route VR-413. Paragraph 2.3.1.7 indicates a maximum altitude of 3000 ft. AGL over the Sangre De Christo and Greenhorn Mountain Wilderness Areas. I object to this maximum altitude limit. The higher aircraft fly over a wilderness area the less disturbance there will be to the area, its inhabitants or its visitors. The last paragraph on page xi and the "mandatory requirements" of Paragraph 1.4.3 define a minimum altitude of 2000 ft AGL over wilderness as does Appendix L, but none state a maximum altitude. It is recommended that any maximum altitude over wilderness be eliminated. 1

4. Paragraph 1.4.1.1 indicates that "within a weapons delivery range, such as an Airburst Range, practice munitions can be dropped". This does not indicate where munitions can and can not be dropped. It is assumed that munitions can only be dropped in the Fort Carson Air-to-Surface Gunnery Range, but the EIS does not say so. Highways US 50, Colorado 115, 96 and roads to Victor and Cripple Creek all lie in the Airburst MOA. These roads and traffic on them must be protected from any practice munition drops. It is recommended that the areas where munitions drops to the ground are allowed and prohibited be carefully specified. 2

5. The "Original Proposal" for the La Veta MOA is better than the "preferred proposal" for protecting the residents of the Wet Mountain Valley. It is recommended that this Original Proposal be further modified by extending the western boundary of the North half all the way to the South boundary. This would eliminate flight proximity to he Great Sand Dunes National Monument, and would eliminate flying over the Southern Part of the Sangre De Christo Wilderness. This southern part 3
contains at least seven mountains over 14000 feet in elevation and is the most used part of the range for mountain recreation. Most of these mountains require some technical climbing and the sudden passage of a high speed aircraft could well cause an accident. Also, in winter, the noise of nearby aircraft would be likely to trigger avalanches. 4

6. I do not consider the noise evaluation presented reflects the affect on people who may suddenly have a high speed aircraft fly over their heads at 500 feet AGL or even at 2000 ft AGL in a wilderness area. People do not hear a weighted average over twenty four hours. They hear 5

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

Munitions may only be dropped at a weapons delivery range.

Response to Comment No.3

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.4

No documented reports of injury resulting specifically from aircraft noise to any persons participating in these recreational activities in mountainous areas have been reported.

Response to Comment No.5

Day-night average sound levels represent the cumulative impact of noise, accounting for the level of each event, its duration, and how many events occur each day. Ldnmr also accounts for the startle factor associated with a high speed aircraft suddenly appearing. While day-night average levels provide a technically meaningful quantity, they do not provide a description of what would be heard at any given time. Individual event sound levels are presented in Appendix I and other places in the EIS to provide this description.

The sound levels presented in Appendix I are those which would occur when an aircraft flies directly overhead. Because flights are spread across each airspace, a direct flyover would rarely occur. The analysis for each airspace presents, in addition to Ldnmr, the number of times each day noise events will exceed a single event noise level of 65 dB. That represents how often noise will be intrusive.

It is not meaningful to compare individual flyover levels with L50. It is more meaningful to compare typical maximum levels (not just direct overhead flights) with the L01 levels presented. It is particularly meaningful to compare projected levels with the maximum levels (reported in appendix H) from current aircraft operations.

the plane for perhaps a second or two before it passes overhead and then for a few seconds afterwards. The sound levels shown in section I of the appendix in tables 4 through 16 are representative of the sound people will hear. At 500 ft AGL, all but one of the referenced flights are over 100 db and many are over 110 db. At elevations of 2000 ft AGL over a wilderness area, half of those listed exceed 100 db and nearly all are over 90 db.

The 50% sound levels reported in Appendix G for sites 4, 5, 10, 11, 12, and 13 are all between 38 and 40 db. I consider these measurements high for mountain or wilderness areas, but will accept them as available data. If we accept the statement in Appendix G that the human ear detects 10 db as doubling the sound level, this places the sound of a plane flying 500 feet overhead at between 64 and 128 times the background level. This would be most disturbing to say the least and would certainly destroy the serenity of the Wet Mountain Valley and The Sangre de Christo or Green Mountain Wilderness areas.

Sincerely,

David Waddington

David Waddington

CC: Custer County Action Association
P.O. Box 552, Westcliffe
Colorado 81252

LAWRENCE E. CORMIER, M.D.
GENERAL AND GERIATRIC PSYCHIATRY
EXPERT MEDICATION THERAPY

DIPLOMATE,
AMERICAN BOARD OF
PSYCHIATRY AND NEUROLOGY

May 9, 1996

Program Manager, CAI EIS
ANGRS/CEVP
3500 Fetchet Ave
Andrews AFB, MD 20762-5157

RE: COLORADO AIRSPACE INITIATIVE/
DRAFT ENVIRONMENTAL IMPACT STATEMENT

Dear Program Manager,

I am writing you to express my objections to the CAI DEIS as it applies to the San Luis and Wet Mountain valleys. Frankly, the use of the Day-Night Averaging standard for these special, quiet areas is a farce. Any reasonable citizen and voter can see that this method of noise analysis is unsuited to the situation at hand. Using it is a self-serving effort to force the low-altitude flight training upon the public. The Region of Impact includes two National Wilderness Areas, two National Forests, immediately borders the Great Sand Dunes National Monument, and is home to thousands of peace-loving ranchers and rural citizens. 1

I lived in rural Pueblo county several years ago, and frequented the peaceful San Luis and Wet Mountain valleys and their surrounding mountains. Low-altitude flights in certain areas of the south central Colorado will clearly have an adverse impact upon vacationers, local residents, wildlife and the general quality of life in the region. I am specifically requesting your help in eliminating Airburst MOA, LaVeta MOA, VR-413, and all MTRs leading to Airburst Range. 2 3

Thank you very much for your consideration.

Sincerely,

Lawrence E. Cormier, M.D.

CC: CO Airspace Alliance c/o Custer County Action Assoc
CO Governor Roy Romer

50 SOUTH STEELE ST. • SUITE 950 • DENVER, COLORADO 80209 • OFC.: (303) 320-8554 • FAX: (303) 320-0189

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RESPONSES TO COMMENTS

Response to Comment No.1

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

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RESPONSES TO COMMENTS

Response to Comment No.2

Many citizens have expressed concern that their quality of life, which is based directly on the kind of lifestyle that they can enjoy while residing in or visiting the State of Colorado, will be changed by implementation of the CAI. The U.S. Air Force, including the ANG, has been conducting military aircraft operations in the Wet Mountain Valley and the San Luis Valley areas where people are most concerned for approximately 25 years. Most of the military airspace proposed under any of the alternatives is currently in use. Commercial aircraft overflights have also been taking place and will continue to do so. Citizens may notice changes in military aircraft overflights in certain areas associated with the CAI. The number of sorties are proposed to increase moderately in portions of the study area and decrease in others. Overall sorties will be reduced from 5,441 to 4,909 under the Preferred Alternative. The bottom altitudes of several airspaces where citizens are most concerned have been raised to reduce noise levels. Therefore, existing quality of life should not be changed.

Response to Comment No.3

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

Mrs. Theresa A. Murphy
7033 Timbercroft Lane
Fayetteville, NC 28314
(910) 487-3279

9 May 1996

David C. Van Gasbeck
Chief. Environmental Division
Air National Guard
3500 Fetchet Avenue
Andrews Air Force Base, MD 20762-5157

Dear Sir:

I am objecting to the way they did testing and averaging the noise level for the area of Westcliffe, Colorado. The aircraft noise is still heard at 110 dB. The noise is heard at 110 dB not heard at an average. The 65 dB is a high level in a peaceful quiet rural setting. The MOA 300 feet level is too low. The MTR is only 1 mile away from where we own property in the Antelope Valley area of Westcliffe. (VR 412-13) They haven't proved why they need this air space. They are trained and ready now so they shouldn't need more space. They have decreased the amount of planes and now they say they need more space. I am also concerned about the impact on the environment; such as the startle effect on the local animals and wild life. There are deer, elk, and antelope who will be startled by the effect of the low flying aircraft in Westcliffe, Colorado, not to mention pets and other animals. I am greatly concerned about the startle effect with animals quickly being startled and running out into the roads and causing an accident with a vehicle and injury to the animals and others. We enjoy the peaceful quiet atmosphere of the Westcliffe, Colorado area without any added aircraft noise and possible deviations from their air space routes. Please consider the opinions of the land owners, residents and Safety of natural animals of the area before making any changes in the Colorado Airspace Initiative (CAI) and the Military Operations Area (MOA) that is proposed for Custer County and surrounding areas. Thank you.

1
2
3, 4
5

Sincerely,

Theresa A. Murphy

Mrs. Theresa A. Murphy
(Colorado land owner)
Antelope Valley,
Custer County

219

RESPONSES TO COMMENTS

Response to Comment No.1

The approach used in the EIS has been modified. The Federal Interagency Committee on Noise (FICON), representing a variety of Federal agencies with a mix of concerns associated with aircraft noise, reviewed aircraft noise analyses issues in 1992. This committee's report (FICON 1992) continued an approach to evaluating relative impacts associated with aircraft noise that has been recognized by noise analysis experts as the most widely endorsed and comprehensive approach to aircraft noise analysis available. This approach to noise analysis was incorporated into the analyses associated with the Draft EIS. In general, Federal land use compatibility criteria are derivatives of guidelines first devised for land near airports. All land use compatibility is based on the use of Day-Night Average Sound Level (abbreviated as DNL or Ldn) as the descriptor representing community noise environments. The criteria treat areas below DNL 65 dB as compatible for all uses, including residential, and they treat DNL 65 dB as a threshold for significant exposure. There is no generally accepted method for treating rural areas differently for these purposes.

However, many EIS reviewers, including some members of the Federal regulatory community, felt the application of the FICON standards, and the 65 dB threshold, to a rural setting was inappropriate for such areas with more quiet ambient noise conditions. Consequently, the use of the 65 dB threshold as the sole means to assess relative impacts or the acceptability of noise levels associated with aircraft operations addressed in the EIS has been modified and the analysis now includes additional information to evaluate potential impacts.

Response to Comment No.2

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Response to Comment No.3

Studies conducted on wildlife have shown that numerous wildlife species have the ability to adapt to the presence of man and various man-made sound sources, including jet aircraft noise. While the noise generated from low-altitude military overflights may be initially startling, habituation to jet aircraft noise occurs with most wildlife species. Species-specific responses to low-altitude overflights vary considerably, and responses from individual animals may have the potential to cause injury. However, wildlife populations are usually affected only when a variety of factors work in combination to impact them, including declines or fluctuations in the availability of a food source, habitat destruction or alteration, predation, hunting, trapping, poaching, disease, or inclement weather, rather than noise alone. Normally, it would be unrealistic to predict or attribute any wildlife population declines to a single stressor, such as noise. In addition, no published scientific evidence was identified that indicated harm may occur to wildlife as a result of exposure to the levels of noise generated by military aircraft that would utilize the airspace associated with the Colorado Airspace Initiative.

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RESPONSES TO COMMENTS

Response to Comment No.4

It is possible that aircraft noise could startle domestic animals, especially young or penned animals, and cause them to injure themselves. However, animals adapt and habituate to various sound sources, including jet aircraft noise. Because the airspaces associated with the CAI are mostly existing airspace that have been utilized for over 25 years, this adaptation and habituation to jet aircraft noise has likely already occurred.

Response to Comment No.5

There would be some changes in sortie numbers, noise levels, and airspace dimensions under the Original Proposal and the Preferred Alternative addressed in the EIS. However, overall flying hours of the 140 WG will be reduced from 5005 hours to 4600 hours. When compared to existing military aircraft training in the study area, these changes would not change the current levels of solitude and peace and quiet experienced by residents. As under current conditions, noise from military aircraft operations may periodically disturb citizens and affect their enjoyment of solitude; however, opportunities for abundant periods of total peace and quiet would continue as under present conditions.

colorado
environmental
coalition

Grant Street, Suite 606
ıver, Colorado 80203-3518 • (303) 837-8701

May 10, 1996

The Honorable Patricia Schroeder
2307 Rayburn House Office Building
Washington, D.C. 20515

Dear Pat,

I am writing you today regarding the Draft Environmental Impact Statement of the Colorado Airspace Initiative. I won't pretend that I have read and understand the entire document but rather will tell you what the Sangre de Cristo Mountains and the San Luis Valley mean to me.

I have been a member of Valley View Hot Springs for fifteen years. It is located in the western foothills of the Sangre de Cristo Mountains about ten miles down a dirt road east of Villa Grove. It is a place of incomparable beauty and serenity. As I live in downtown Denver, the peace and tranquility of the hot springs provides a sanctuary and a spiritual retreat for me that has no equal anywhere in the world.

I usually get up before dawn and walk up to one of the soaking pools. As I lay in the hot, rejuvenating waters, I can look out across the San Luis Valley and watch the sun hit the tallest peaks of the San Juan Mountains over sixty miles away. As the steam rises off the waters, it is not uncommon to see half a dozen deer browse on the hillside next to the pool. 1

For thirty years, I have hiked and camped in Colorado, but I have never seen more birds and wildlife than I routinely see at the hot springs. Dozens of Pinyon Jays circle overhead, and Western Tanagers, Grosbeaks, Goldfinches, Barn Owls, Red Tailed Hawks and even Golden Eagles are common visitors. The Sangre de Cristos Wilderness Area also has mountain lions, bears and bobcats and numerous endangered species.

Please save this serene valley and majestic mountains from the screaming jets of military overflights.

Sincerely,

Dennis B. Williams

Dennis B. Williams
Board President

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recycled paper

Member, Community Shares of Colorado

RESPONSES TO COMMENTS

Response to Comment No. 1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

RAMPART
BUSINESS SERVICES

2773 GRIZZLY DRIVE LITTLETON, CO 80127 303/979-1072 FAX 303/973-0366

May 12, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Ave
Andrews AFB, MD 20762-5157

Dear Sir or Madam:

I have just received information from the Colorado Environmental Coalition concerning low-altitude training in the San Luis & Wet Mountain Valleys. Apparently the DEIS concluded that there would be no significant impact on the surroundings because the 24-hour average noise level does not exceed an arbitrary level of 65 db. A military aircraft practicing low-level maneuvers can spike the noise level to 100 to 150 db, depending on conditions. Apparently the heart of the argument is that averaging this sonic explosion with the ambient background of 30 db will produce an acceptable db noise level that yields no impact. 1, 2

I have been involved with other public hearings that attempt to justify a self serving conclusion that had to be based on outlandish methods. These fell in the same category of averaging a pristine environment with an occasional industrial intrusion to produce the same noise level of down town Manhattan. Since so many people live in Manhattan, that noise level must be an OK standard. This type of professional prostitution by consultants will not stand. When faced by their peers in the form of other professionals or a lay person who has the slightest bit of perception and common sense, this testimony or body of "research" falls into such disrepute that often the entire project is scuttled. 3

We may not have the opportunity to sit face to face with the analysts who made such a conclusion. However, since this part of the DEIS was financed with public funds and there are no apparent security issues, I feel that I have the right to know more about this "research."

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RESPONSES TO COMMENTS

Response to Comment No.1

The approach used in the EIS has been modified. The Federal Interagency Committee on Noise (FICON), representing a variety of Federal agencies with a mix of concerns associated with aircraft noise, reviewed aircraft noise analyses issues in 1992. This committee's report (FICON 1992) continued an approach to evaluating relative impacts associated with aircraft noise that has been recognized by noise analysis experts as the most widely endorsed and comprehensive approach to aircraft noise analysis available. This approach to noise analysis was incorporated into the analyses associated with the Draft EIS. In general, Federal land use compatibility criteria are derivatives of guidelines first devised for land near airports. All land use compatibility is based on the use of Day-Night Average Sound Level (abbreviated as DNL or Ldn) as the descriptor representing community noise environments. The criteria treat areas below DNL 65 dB as compatible for all uses, including residential, and they treat DNL 65 dB as a threshold for significant exposure. There is no generally accepted method for treating rural areas differently for these purposes.

However, many EIS reviewers, including some members of the Federal regulatory community, felt the application of the FICON standards, and the 65 dB threshold, to a rural setting was inappropriate for such areas with more quiet ambient noise conditions. Consequently, the use of the 65 dB threshold as the sole means to assess relative impacts or the acceptability of noise levels associated with aircraft operations addressed in the EIS has been modified and the analysis now includes additional information to evaluate potential impacts.

Response to Comment No.2

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

Response to Comment No.3

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

RAMPART
BUSINESS SERVICES

12773 GRIZZLY DRIVE LITTLETON, CO 80127 303/979-1072 FAX 303/973-0366

Page 2/2

Please provide me with the following answers.

1. What is the name of the firm who conducted this noise study?
2. How was that firm or individual(s) selected?
3. Who were the individuals who actually conducted the study?
4. What are their qualifications to conduct such studies?
5. What other government contracts has this firm or individual(s) been awarded?
6. Was the government contract to conduct this study part of another project, or was this study particular to The San Luis & Wet Mountain Valleys?

Please have this information to me by May 28, so I may meet the comment cut of date of June 5.

4

Yours truly,

Allan C. Gordon

cc:
Colorado Airspace Alliance
c/o Custer County Action Association
P. O. Box 552
Westcliff, CO 81252

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RESPONSES TO COMMENTS

Response to Comment No.4

Information on the firms preparing the EIS and the qualifications of the specific personnel involved in the noise analyses was previously given in Section 5 of the Draft EIS that was distributed to the public on March 29, 1996. Noise analyses were accomplished specifically for the EIS for all the airspaces associated with each of the alternatives addressed in the document rather than just for the San Luis and Wet Mountain Valleys.

All contractors that prepare environmental studies for the ANG are selected through competitive procurements in accordance with the Federal Acquisition Regulations (FAR), including the firms associated with this EIS: Science and Engineering Associates, Inc.; National Security Analysts, Inc.; and Wyle Laboratories.

Information on the firm's other government contracts can be obtained by contacting the firms directly.

May 13, 1996

Response to Draft EIS for the Colorado Airspace Initiative.

Because of the limited time and resources our department has available, we've incorporated the Director of the National Airspace Coalition, Dale Ahlquists' response, into some of our concerns.

It took three professional firms and a government agency four years to produce the DEIS. How can you expect a group of volunteer, non-professional part-timers to be able to respond to it in 60 days. 1

The background for the reason of the Colorado Airspace Initiative (CAI) is ambiguous at best and unfortunately thoughtless and destructive to rural Colorado at worst. Reasons for CAI bounce from "The new Denver Airport" to "F-16 modernization" while at the same time WG-140 already admits to "maintaining its readiness" seems to indicate that once the airspace is gotten from this initiative, a justification will evolve. What you are actually doing is mere speculation of the airspace. 2

These are some basic questions which trouble us

What is the purpose of "Airburst "C" and why is it so important to this airspace plan? Where is that explained in the DEIS?

Why the increased number of sorties in Airburst and in the MTRs leading into Airburst if there is only a 10% loss of the sorties in Kit Carson, a loss which is more than compensated for by the addition of Two Buttes MOA? 3

Can Colorado (or any state) afford the luxury of having its Air National Guard units design their own airspace because they do not find it convenient to deploy?

What other units will have access to this airspace once this plan is initiated? 4

It is environmentally and economically and ethically responsible to underlying residents to keep adding military airspace to the national airspace system to accommodate local Air National Guard Units? 5

What are the costs, the real costs, and all the costs of flying an F-16 per hour? Per year? What would be the cost of purchasing an F-16 flight simulator for Buckley AFB and how soon would the purchase be paid off by the savings reducing actual air time? This is not a suggestion of replacing all flight training with simulators but greatly reducing the overflights. 6

Low Altitude Training (SAFETY)

Air-to-Surface attacks in the Gulf War were from medium to high altitudes. New technology renders most low-level tactics outdated and unnecessarily risky, why the need for low altitude training ? 7

In the DEIS Draft appendices there is a graph showing **1987-89 Air Force Bird Strikes Worldwide by Altitude,** and since the majority take place in the first 2000 ft. above the surface, why not minimize impact to birds, and further enhance the safety of the pilot by lifting altitude restrictions from 500 ft to 2000 ft. since the San Luis Valley is a wildlife corridor for many species of migrating birds? 8

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RESPONSES TO COMMENTS

Response to Comment No.1

The Council on Environmental Quality provides guidelines for the preparation of Environmental Impact Statements, and the review of EISs by the public and various government agencies. These guidelines direct agencies to "allow not less than 45 days for comments on draft statements" (Section 1506.10 of these guidelines). The comment period for the CAI Draft EIS officially opened March 29, 1996 with the Notice of Availability published in the Federal Register. The initial mailing of the statement to over 750 addressees was accomplished on March 20, 1996 prior to the NOA. The close of the comment period was initially published as June 5, 1996 (68 days), and then extended to July 12, 1996 (105 days).

Response to Comment No.2

The Colorado Airspace Initiative is not an expansion of airspace, but rather a modification. In many cases, this modification actually results in a reduction of airspace and/or number of sorties flown. The need for the Colorado Airspace Initiative is presented in Subsection 1.3 of the EIS.

Response to Comment No.3

The number of sorties in the Airburst MOA will decrease from 2,536 to 2,461 sorties under the Preferred Alternative.

Proposing airspace to meet local training requirements is fiscally prudent. The declining Defense Appropriation and readiness training requirements dictate reducing the number of deployments as much as possible.

Response to Comment No.4

All known users of the proposed Colorado Airspace Initiative training airspace have been identified in the document (see Appendix N). No additional aircraft will be permitted to use the proposed or existing training airspace without supplemental environmental analysis.

Response to Comment No.5

The opening of the Denver International Airport resulted in the loss of approximately 40 percent of the New Raymer MOA and air traffic control assigned airspace. The impact on the existing Kit Carson MOA, combined with changes proposed under the CAI Preferred Alternative, would result in an overall decrease in the total military training airspace available.

RESPONSES TO COMMENTS

Response to Comment No.6

The reimbursable cost the Air National Guard (ANG) forwards to all F-16 C/D units, including the 140 WG, is $1,629 per flying hour. A flight simulator would cost approximately $10 million, not including facility construction, yearly maintenance, utilities, and additional personnel.

The ANG follows United State Air Force rules and regulations (AFI 11-F16) in programming their actual versus simulator flying program. With only 2 F-16 C/D simulators in the ANG system nationwide, availability of simulator time is very limited.

Response to Comment No.7

Low-altitude flights allow pilots to learn to avoid detection and to survive in combat. Low-altitude flying provides a significant operational procedure through which detection can be minimized. Training is essential to acquire the skill to use this procedure. Specific combat conditions that allowed high-altitude operations in the Gulf War may not exist in future conflicts. The need for this training is required by Air Force training regulations.

Response to Comment No.8

The USAF has established a Bird/Aircraft Strike Hazard (BASH) Team to implement procedures to prevent and reduce the threat of bird/aircraft strikes, and to investigate and track any bird strikes that occur. In addition, each USAF/ANG base or flying unit is required to establish a BASH program to minimize the risk of bird strikes both at the base airfield and in airspace training routes for the unit. The USAF BASH Team assists each base or flying unit by providing Bird Avoidance Model (BAM) graphs. These graphs estimate the relative bird strike risk for flying along a specific low-level route or operations area. The model is developed on the basis of waterfowl and raptor migration and concentration data and accounts for seasonal concentrations of birds. The BAM graph depicts the severity of the bird strike hazard at a particular time of day, month, and segment of a low-level route. This information is used by the flying unit to determine the optimum route schedule, and avoidance measures to be taken to prevent bird/aircraft strikes. In addition, the unit publishes notices to Airmen (NOTAM) to alert transient aircrews to specific bird migration hazards activity periods, and avoidance procedures.

What's more, the DEIS has not even attempted to seriously explore the question of whether Military flyovers are even compatible with Wilderness areas. Has the DEIS truly considered the value of *natural quiet* as a scarce national resource? 9

Section 3-5 of the DEIS states "Initial response to an aircraft accident is the responsibility of the civilian authorities nearest the crash site, who provide emergency services such as fire, police and medical assistance."

The DEIS states, "The National Guard Bureau NGB would provide training on aircraft accident response requirements to any emergency response agency in the area...upon request."

Does the NGB have any information on present capability of volunteer emergency crews? Has the NGB asked local volunteer emergency crews whether they want to deal with a potential military crash impact in their area? What about clean-up following the crash?

The potential fires caused by jet crash has not been fully evaluated. The scenario of quote "dry and windy climatic conditions at certain times of the year could aid to the rapid spread of fire" does appear a number of times in the DEIS followed by "In addition, there are no small surrounding communities that have even a limited response capability," followed by "The National Guard Bureau will provide training..." etc. "...upon request" as stated above.

So the premise is that there just isn't enough potential jet crashing to worry about so we'll just repeat the same paragraph over and over for each fire hazard scenario we come up with and leave it to the local emergency departments to deal with it. Thanks for all the thought you've given to the volunteer emergency crews in these MOA/MTR areas. 10, 11

For all your military preparedness you seem to lack some of the basic fundamentals of an educated and prepared emergency response team who are at best an hour away from a crash scene. The core of your plan is a volunteer emergency crew that doesn't have the expertise to deal with this worse case scenario which continues to occur throughout the country if you watch the news on a regular basis. You are putting an enormous responsibility on emergency people who may not even be aware that this DEIS on the CAI exists.

Finally, the Wet Mountain Valley and the San Luis Valley have no socioeconomic/financial benefit from this initiative. You want the airspace, you want the emergency protection if it should arise and we get to deal with the consequences in all its forms, because of your desire for more airspace.

So we find ourselves in the precarious situation of having to defend ourselves from our own defense department. This is unfortunate for all of us.

Thank you for your time,

The Baca Grande Volunteer Fire Dept.
P.O. Box 127
Crestone, CO 81131

RESPONSES TO COMMENTS

Response to Comment No.9

The concept of natural quiet as a resource has been added to the Final EIS. This new discussion may be found in Subsection 4.14.

Response to Comment No.10

Initial response to an aircraft accident is the responsibility of the civilian authorities nearest the crash site, who would provide emergency services such as fire, police, and medical assistance, as necessary. It is the responsibility of the civilian unit responding to an aircraft accident to determine what response actions they are capable of performing, including the evaluation of proper personnel training and response equipment. If the responding unit is not capable of performing certain response actions, they should request assistance from the nearest civilian unit capable of performing the required response. In the event of an aircraft accident, the nearest USAF installation would be notified by these authorities. In most cases, the nearest USAF installation would have been previously notified by the USAF unit associated with the downed aircraft. Upon notification of the aircraft accident, the commanding officer of the nearest USAF installation dispatches a Disaster Response Force. The Disaster Response Force includes personnel who have been trained to respond to this type of occurrence, and would include disaster preparedness, security police, medical, fire department, legal, munitions, mortuary, and others as required. The Disaster Response Force would assist local response teams in matters of fire suppression, site security, medical treatment and evacuation, accident evaluation and investigation, retrieval of classified materials or equipment, and protective measures, such as munitions disposal and hazardous/toxic materials protective measures. When necessary, the Disaster Response Force would coordinate activities with other regional response forces to ensure all personnel and equipment are obtained for proper mitigation and control of the accident site. It is the ANG policy to provide training, upon request, on aircraft accident emergency response to any recognized emergency response agency.

Response to Comment No.11

The ANG/DOD would be fully responsible for any soil, water, or groundwater contamination, property damage or destruction, and injury or death to persons caused as a result of an ANG/DOD aircraft accident. Awards resulting from this type of incident would be determined on a case by case basis. The ANG, DOD, or its designated agent would be responsible for full evaluation and remediation, if required, of any contamination at an aircraft accident site.

May 13, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

Dear Exalted, Almost Always Right Program Manager:

What We Have Here Is A Failure To Communicate!!!!

The Colorado Air Space Initiative seems to be a cover for excessive noise pollution in pristine countryside. While your mission must be carried out, it appears you're stretching the truth by indicating highly modern and noisy jet aircraft are compatible with areas where the loudest sound emissions are old trucks with loose mufflers.

If you'll let me digress from the immediate situation. I've had the questionable pleasure of viewing and hearing low level maneuvers by military aircraft in the remote California valleys of the Eastern Sierras. From a enchanting, nature-filled and quiet environment to one louder than any international airport flight path was the gift from the government. If I had been a hunter instead of engaging in the quiet pastoral pursuit of flyfishing, there might have been a few well-placed holes in the offending fuselages; giving those stick-happy, buzzing scamps more combat realism than they desired. As it was there may have been some flies lodged from my high backcasts! 1

Using your numbers, kind person, I assume those jets would have generated noise consistent with a scolding bluejay given the liberty of averaging which you're grasping with two hands.

The hills and primitive countryside here must not to be similar fodder for your jet jockeys. The inane averaging of the overpowering noise with the normal incidence of almost absolute silence seems more appropriate emanating from the White House where the end justifies the means. Just observe what manner of commander-in-chief you've acquired using such a path. 2

Much More Is Expected Of You Than...

just railroading such procedures through, gentle Program Manager. If you propose doing something contrary to the best welfare of the citizens of this and other remote areas at least have the honesty to lay the total deck of cards on the table. Or at least exhibit the behavior of political scoundrels and appeal to patriotism.

The citizens relocated to these areas because the very thing you propose to foist on them was a common occurrence in the bulging metropolises. Fly over Denver, Colorado Springs and/or Pueblo where such things, with rock concerts, sporting events and drive-by

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

shootings, are expected. Or better yet add your traffic over D.I.A.!! Buzzing a jumbo jet would be a real thrill for everyone. And they can use the business!

Dear Program Manager, if you truly seek the welfare of we ground-dwellers and huggers and still expect your mission to be carried out, at least approach those affected with true information and use facts pertinent to the areas encompassed. In other words do things in an honest, honorable forum whereby comments from the victims counts for more than an unwelcome auditory diversion. Basing your statistics on gobbledygook nomenclature and a government that is always right won't work.

3

Remember those you choose to train as our champions everywhere in the world are sprung from we the people—if you elect to ignore us you are building the foundation of your service on a easily eroded soil.

Awaiting your newly adjusted, proper metal attitude,

James R. Blevons
P.O. Box 1192
Westcliffe, CO 81252-1192

PS This comes from someone that served in the Air Force and holds that branch in high esteem. Watching, or engaging in the jet experience, is an overwhelming occasion—when done in the proper environment. You've not lived until a B-1, or like craft, flies directly overhead at a low altitude. While awe-inspiring, it doesn't belong in a natural setting with deer, rabbits and various types of other highly endangered fauna and flora!

4

RESPONSES TO COMMENTS

Response to Comment No.3

The ANG cares about the people that live near their training areas and how they feel about the activity associated with training. The NEPA process is providing the ANG with an opportunity to hear exactly what the public feels about its proposal before any decisions are made. Every scoping comment and every comment on the Draft EIS sent to the ANG has been read and incorporated into the administrative record for the proposal. Public comments have provided a better picture of what subjects the public wanted addressed in the document and have enabled the ANG to improve the EIS by adding or expanding to discussions in the Final EIS. Examples of added or expanded discussions include human health effects, natural quiet, environmental justice, amongst others.

Response to Comment No.4

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

May 13, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

Sir:

We most seriously object to MOAs in our area.

We live in Cuerno Verde Pines. A lovely QUIET area at 8,500 elevation. We have sights of deer, antelope, bobcat, mountain lion and bear near our home frequently. We co-exist. We respect each other's privacy and space. 1

You must not destroy our lives! We want all to remain as is. You must not increase the noise level from 30 to 110 decibels. Do not have MTRs over our home or in our valley. 2

NO. NO. GO AWAY MOA.

Robert Fricke

Robert W. & Eileen M. Fricke
342 Wykagyl
Westcliffe, CO 81252

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RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

5/13/96

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

RE: Draft Environmental Impact Statement

Dear Program Manager:

I feel none of the alternatives in the DEIS are acceptable. Sufficient justification for the CAI or the action alternatives has not been convincingly demonstrated in the DEIS. 1

I see no need for any training flights, particularly low altitude flights, over or within 30 miles of a state or national forest, park or wilderness area. Peace and quiet and environmental integrity are the objectives of creating these areas which I hold most dear, and such flights violate those objectives. When two government functions are at cross-purposes, our country's money is wasted, and an alternative must be found. 2

In my opinion, our country has more than enough military land over which to conduct training without disturbing other areas. If the CAI is denied, perhaps the USAF Airspace Master Plan can be revised to restrict training flights, particularly low altitude ones, to military bases. 3

Gwen E. Hoffnagle
58591 Martinnez Dr.
Moffat, CO 81143

719 256-4145

CC: Custer County Action Association
P.O. Box 552
Westcliffe, CO 81252

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RESPONSES TO COMMENTS

Response to Comment No.1

The Colorado Airspace Initiative is not an expansion of airspace, but rather a modification. In many cases, this modification actually results in a reduction of airspace and/or number of sorties flown. The need for the Colorado Airspace Initiative is presented in Subsection 1.3 of the EIS.

Response to Comment No.2

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.3

Whenever possible, the ANG tries to accomplish its training while flying over military or government-owned land. The Colorado ANG currently flies and trains over land belonging to the U.S. Army at Fort Carson and uses the Buckley Air National Guard Base. Military airspace also exists over lands owned by other Federal agencies, including lands administered by the Bureau of Land Management and the U.S. Forest Service. Completely eliminating flights over privately-owned lands and other selected areas, such as parks, however, would be impractical. Routes to link various training areas together are an essential part of the training airspace configuration and may be located over non-federally owned lands.

52 Shawnee Path
Westcliffe, Co., 81252
May 13, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Ave.
Andrews AFB, MD 20762-5157

Dear Sir:

This letter is in regard to the Colorado Airspace Initiative, which, as you know, proposes a major expansion of the airspace used for military training over Colorado. The proposed plan would claim nearly one-fourth of the state of Colorado!

When the Wilderness Bill was passed in 1993, motorized vehicles were banned from our wilderness areas in an effort to protect them against noise and the effect it would have on the well-being of the wildlife in these areas. This initiative, which would permit military aircraft to engage in low flying maneuvers over these protected areas is totally absurd! The purpose and the accomplishments of the Wilderness Bill would be destroyed! 1

Many authorities feel that low level flying is obsolete in today's military, and a waste of tax dollars, as it is no longer needed. Nevertheless, if the military wants another playground, we, in Colorado, feel that it has deliberately overlooked training options that would adequately meet their needs. 2, 3

Another consideration is the fact that in 1993, the government reduced the Colorado Air National Guard's jet force by 40%. They have no mission and have been called to active duty only once in their 47 year history. One might assume that if the Air National Guard is phased out, these areas will be taken over by the Air Force, resulting in heavier use and destruction. 4

Our country is burdened with over-population. Pristine areas such as these, where one can withdraw from the noise and stress of everyday life are few enough. The Airburst MOA, LaVeta MOA, and all MTRs leading to the Airburst Range should be eliminated, as they would destroy what the Wilderness Bill was created to protect. 5, 6

Thank you for your consideration.

Sincerely,
Anne Owens
Anne Owens

cc. Sen. Hank Brown
Sen. Ben Nighthorse Campbell
Gov. Roy Romer

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RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

Low-altitude flights allow pilots to learn to avoid detection and to survive in combat. Low-altitude flying provides a significant operational procedure through which detection can be minimized. Training is essential to acquire the skill to use this procedure. Specific combat conditions that allowed high-altitude operations in the Gulf War may not exist in future conflicts. The need for this training is required by Air Force training regulations.

Response to Comment No.3

The use of other training areas was examined as part of the development of the alternatives studied in detail in the EIS in Subsection 2.3. The proposal was designed to minimize conflicts with potentially sensitive areas while providing the training resources necessary to meet military readiness requirements. Specific narrowing criteria for the selection of military training airspace (see Subsection 2.3.3 in Volume I) were used to evaluate other locations, and no alternative training areas were identified that could be substituted for the airspace configuration proposed in the alternatives studied in the EIS.

The primary user of the airspace included in the Colorado Airspace Initiative is the 140 WG based at Buckley Air National Guard Base in Aurora, Colorado. Because of limited resources and aeronautical constraints, virtually all of our nation's fighter units train in airspace that is within a "tank of gas" of the aircrews' base.

Response to Comment No.4

The Air National Guard (ANG) is a congressionally approved entity that functions as part of a total force with its active duty counterparts. The 140 WG was, in June/July, 1996, put on "active duty" status to support Operation Southern Watch, a United States effort to assist in enforcing the "no-fly" zone in Iraq. Several other ANG units are currently on active duty status supporting similar activities in Iraq, Turkey, Bosnia, Panama, and Columbia.

Response to Comment No.5

The ANG makes every effort to protect designated wilderness areas from aircraft noise. Non-designated areas and general lands under the jurisdiction of the Bureau of Land Management that may be viewed as pristine areas to many citizens carry no special protections from man-made noise sources. Should specific sensitive areas or noise receptors be identified, procedures may be implemented to provide avoidance of aircraft overflights of these areas.

Response to Comment No.6

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

022L Anne Owens

P. O. Box 1429
Silver Cliff, CO 81249
May 13, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

Dear Sirs:

In speaking or thinking of the Wet Mountain Valley two words come to mind: PEACE and QUIET. These are words echoed over and over when asking new-comers why they moved here; in Letters-to-the-Editor in the WET MOUNTAIN TRIBUNE from out-of-state property owners yearning for the day when they will move here; and in the minds of those of us lucky enough to be here already. } 1

This sense of tranquility was not always the case. There were several years - about 1987-1990 I would guess - when low-flying military jets were literally screeching over our roof-top. We were hiking on the Rainbow Trail, at the base of the Sangres, with a couple of friends and their Golden Retriever dog when a military jet skimmed the tree-tops with a deafening roar. We hit the ground in terror and it took us half an hour to locate the dog.

Is it any co-incidence that from about 1991-1995 when a peaceful silence has engulfed this area that there has also been an unprecedented building boom here? Custer County is supposed to be the tenth fastest growing county in the Country. } 2

Can't you leave this pristine area in peace?

Sincerely,

Stuart H. Peckham

Stuart H. Peckham

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RESPONSES TO COMMENTS

Response to Comment No.1

There would be some changes in sortie numbers, noise levels, and airspace dimensions under the Original Proposal and the Preferred Alternative addressed in the EIS. However, overall flying hours of the 140 WG will be reduced from 5005 hours to 4600 hours. When compared to existing military aircraft training in the study area, these changes would not change the current levels of solitude and peace and quiet experienced by residents. As under current conditions, noise from military aircraft operations may periodically disturb citizens and affect their enjoyment of solitude; however, opportunities for abundant periods of total peace and quiet would continue as under present conditions.

Response to Comment No.2

Since 1970, many Colorado counties, including Custer County, have experienced an increase in total population, the number of housing units, property values, and the general local economy. Because many factors contribute to socioeconomic conditions and no absolute link between aircraft overflights and economic changes can be determined, it is not possible to conclude that an increase (or decrease) in building activity is directly attributable to a change in the number of sorties flown. Custer County appears to have experienced growth during periods of high and low aircraft activity levels. A review of socioeconomic conditions across the entire CAI study area does not reveal widespread, repetitive, or consistent patterns. For example, while some counties may have experienced an increase in population, housing, and employment, other counties may have experienced a decrease in these conditions. Additionally, some counties may have experienced a combination of growth in population and housing but a decline in local economic conditions.

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SHIPPED MAY 13 1996

Robert E. Wheeler
1135 Kiowa Road
Westcliffe, CO 81252

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

Dear Sir:

I am writing in support of the effort to deny military overflights of our lands included in the planned military operations areas and military training routes. The quiet valley and surrounding areas intended for inclusion to the above mentioned operations areas are at risk with the introduction of low-flying military aircraft. I am not interested in sacrificing the natural quiet that is an integral part of the area ecology. I understand that the standards by which the jet noise is measured would allow the increase of ambient noise level to that of an international airport being located close by. Clearly this would significantly change the living conditions of this quiet valley for both the residents who have chosen to live here for its quiet beauty, and the animals, domestic and wild who have no choice but to live here. 1 2

There is a strange persistence on the part of the Air National Guard to acquire the airspace over our beautiful and peaceful lands for military overflights. When the issue was first proposed, the citizenry of the affected areas responded appropriately with concerns and justifiable resistance to the establishment of the military operations areas. This response alone should be sufficient reason to respect the rights of the people whose lands and lives are effected. Our views do not reflect a narrow minority position. I will be among the many concerned and dedicated people to resist the efforts of a detached group of officials who press their singular interest on us. 3

I submit this letter as a protest to the inconsiderate proposals to establish MOAs and MTRs over our tranquil lands.

Robert E. Wheeler

cc: Governor Roy Romer
Senator Hank Brown
Senator Ben Nighthorse Campbell
Congressman Scott McInnis

RESPONSES TO COMMENTS

Response to Comment No.1

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Response to Comment No.2

Many citizens have expressed concern that their quality of life, which is based directly on the kind of lifestyle that they can enjoy while residing in or visiting the State of Colorado, will be changed by implementation of the CAI. The U.S. Air Force, including the ANG, has been conducting military aircraft operations in the Wet Mountain Valley and the San Luis Valley areas where people are most concerned for approximately 25 years. Most of the military airspace proposed under any of the alternatives is currently in use. Commercial aircraft overflights have also been taking place and will continue to do so. Citizens may notice changes in military aircraft overflights in certain areas associated with the CAI. The number of sorties are proposed to increase moderately in portions of the study area and decrease in others. Overall sorties will be reduced from 5,441 to 4,909 under the Preferred Alternative. The bottom altitudes of several airspaces where citizens are most concerned have been raised to reduce noise levels. Therefore, existing quality of life should not be changed.

Response to Comment No.3

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

To Program Manager, CAI EIS, 14 May 1996

I am writing in response to a letter I received on 13 May referencing the Draft Environmental Impact Statement. I am a active duty Air Force member married, also to a active duty member. We will both retire in two years and bought property in Westcliffe, Colorado. We had hopes of living the rest of our lives in an area that was untouched by humans, where animals and nature were abundant. I now own 3 acres of land that I won't live on, OR be able to sell. This has upset me beyond control. I wanted to retire in the mountains, enjoy the peace and quiet, learn about wildlife and enjoy the outdoors. 1

If I wanted to continue to look at and hear aircraft coming over my home, I'd stay in Clovis New Mexico and get a government job on the flightline. I am outraged at what is happening in the Westcliffe area. We home owners have the right to live in peace and won't let this happen. I am voicing my discontent with the Airburst MOA, La Veta MOA, and all MTRs leading to the Airburst Range. Another solution needs to be found. What would you like me to do with a worthless piece of property? Do you intend t buy my land from me at the price I paid for it? I am a member of the home owners association in Westcliffe and request reconsideration be made on the airspace over Westcliffe. You have not justified using the space and a alternative must be found. I request a written response to my letter from your office. 2 3

Donna M. Boos, MSgt, USAF

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RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

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Response to Comment No.3

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

May 14. 1996

Program Manager. CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB. MD 20762-5157

Re: Colorado Airspace Initiative

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I do not believe your claims that all the noise created by jets flying over my home will not affect the quiet, peaceful lifestyle I chose when moving to Custer County. The occasional flights of helicopters or small aircraft overhead are a disturbance -- you expect me to believe that jet sorties would not magnify that anxiety many times over? 1

I don't see how you can honestly compare our area with communties near commercial airports which was done when the same standard of 65 decibels over a 24 hour average as being an acceptable level was arrived at. There should be no averaging over a 24 hour period -- one flight is enough to cause stress to humans and wildlife in this normally quiet locality. 2, 3

Please leave us the peace and serenity we sought and have enjoyed.

Patricia A. Cracraft

Patricia A. Cracraft

cc: Senator Hank Brown
Senator Ben Nighthorse Campbell
Congressman Scott McInnis
Governor Roy Romer
Custer County Action Association

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

The approach used in the EIS has been modified. The Federal Interagency Committee on Noise (FICON), representing a variety of Federal agencies with a mix of concerns associated with aircraft noise, reviewed aircraft noise analyses issues in 1992. This committee's report (FICON 1992) continued an approach to evaluating relative impacts associated with aircraft noise that has been recognized by noise analysis experts as the most widely endorsed and comprehensive approach to aircraft noise analysis available. This approach to noise analysis was incorporated into the analyses associated with the Draft EIS. In general, Federal land use compatibility criteria are derivatives of guidelines first devised for land near airports. All land use compatibility is based on the use of Day-Night Average Sound Level (abbreviated as DNL or Ldn) as the descriptor representing community noise environments. The criteria treat areas below DNL 65 dB as compatible for all uses, including residential, and they treat DNL 65 dB as a threshold for significant exposure. There is no generally accepted method for treating rural areas differently for these purposes.

However, many EIS reviewers, including some members of the Federal regulatory community, felt the application of the FICON standards, and the 65 dB threshold, to a rural setting was inappropriate for such areas with more quiet ambient noise conditions. Consequently, the use of the 65 dB threshold as the sole means to assess relative impacts or the acceptability of noise levels associated with aircraft operations addressed in the EIS has been modified and the analysis now includes additional information to evaluate potential impacts.

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RESPONSES TO COMMENTS

Response to Comment No.3

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

May 14. 1996

Program Manager. CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB. MD 20762-5157

Re: Colorado Airspace Initiative

I am a full time resident of Custer County. Colorado. having retired here so that I might enjoy the beauty. peace and quiet. For nine years I have enjoyed hearing sounds: such as. a falling snow flake in winter and the whish of flying birds in warm weather.

That will be destroyed if the plan to establish in the County Military Operations Areas and Military Training Routes is put into effect. The sudden noise of jet aircraft will destroy the peace and quiet and adversely affect this County where the deer and the antelope still play. 1

I have served and lived on air bases on three continents and am familiar with jet aircraft noise. To avoid such noise is one reason I chose to retire in Custer County. The very peace and quiet which exist here make the jet noise created much worse than the same noise would be in my home town. Indianapolis. Indiana. or one hundred miles away in Denver. Colorado. 2

Sincerely.

Perry J. Cracraft

cc: Senator Hank Brown
Senator Ben Nighthorse CAmpbell
Congressman Scott McInnis
Governor Roy Romer
Custer County Action Association

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RESPONSES TO COMMENTS

Response to Comment No.1

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Response to Comment No.2

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

May 14, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

Re: Draft Environmental Impact Statement (DEIS)
Regarding The Colorado Airspace Initiative

Dear Sir:

We understand that, as property owners in the areas to be affected by the Air National Guard Military Operations Areas (MOAs) and Military Training Routes (MTRs), have until June 5, 1996 to respond to the DEIS.

We have owned property in the Westcliffe area for 15 years. We truly appreciate the quiet, pristine beauty of Westcliffe with the wildlife we enjoy so much. The Air National Guard Military Operations and Military Training Routes would DESTROY our beautiful area. 1

As for the Draft Environmental Impact Statement, how can the noise level of a jet fly over be averaged over a 24 hour period? And, how can DEIS assume that a noise level of 65 decibels not be annoying? We are not talking about one or two fly overs a month, we are talking up to 17,000 fly overs - day and night, a year. 2, 3

The area of concern is not a community located next to a commercial airport, this is natural, quiet areas not destroyed by noise pollution, to say nothing of the adverse effect on wildlife, the constant risk of crashes (which we hear about every day), forest fires, loss of property values, destruction of the economy, quality of life, and environmental effects. If we had wanted to live next to an international airport, we would have bought there, not in the area we did. 4,5

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RESPONSES TO COMMENTS

Response to Comment No.1

Many citizens have expressed concern that their quality of life, which is based directly on the kind of lifestyle that they can enjoy while residing in or visiting the State of Colorado, will be changed by implementation of the CAI. The U.S. Air Force, including the ANG, has been conducting military aircraft operations in the Wet Mountain Valley and the San Luis Valley areas where people are most concerned for approximately 25 years. Most of the military airspace proposed under any of the alternatives is currently in use. Commercial aircraft overflights have also been taking place and will continue to do so. Citizens may notice changes in military aircraft overflights in certain areas associated with the CAI. The number of sorties are proposed to increase moderately in portions of the study area and decrease in others. Overall sorties will be reduced from 5,441 to 4,909 under the Preferred Alternative. The bottom altitudes of several airspaces where citizens are most concerned have been raised to reduce noise levels. Therefore, existing quality of life should not be changed.

Response to Comment No.2

The approach used in the EIS has been modified. The Federal Interagency Committee on Noise (FICON), representing a variety of Federal agencies with a mix of concerns associated with aircraft noise, reviewed aircraft noise analyses issues in 1992. This committee's report (FICON 1992) continued an approach to evaluating relative impacts associated with aircraft noise that has been recognized by noise analysis experts as the most widely endorsed and comprehensive approach to aircraft noise analysis available. This approach to noise analysis was incorporated into the analyses associated with the Draft EIS. In general, Federal land use compatibility criteria are derivatives of guidelines first devised for land near airports. All land use compatibility is based on the use of Day-Night Average Sound Level (abbreviated as DNL or Ldn) as the descriptor representing community noise environments. The criteria treat areas below DNL 65 dB as compatible for all uses, including residential, and they treat DNL 65 dB as a threshold for significant exposure. There is no generally accepted method for treating rural areas differently for these purposes.

However, many EIS reviewers, including some members of the Federal regulatory community, felt the application of the FICON standards, and the 65 dB threshold, to a rural setting was inappropriate for such areas with more quiet ambient noise conditions. Consequently, the use of the 65 dB threshold as the sole means to assess relative impacts or the acceptability of noise levels associated with aircraft operations addressed in the EIS has been modified and the analysis now includes additional information to evaluate potential impacts.

The Air National Guard is a valuable branch of the military - PLEASE don't let it ruin this beautiful, natural area like so much in this world that has already been destroy by man and progress - for whatever reasons. Once it is destroyed - its too late. Stop it NOW.

Sincerely,
Arthur Dennis

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Arthur Dennis
Audrey Dennis
Sadie Dennis
720 Airlane
Pueblo, Co. 81005

cc: Governor Roy Romer
136 State Capital Bldg.
Denver, Co. 80203-1792

Senator Hank Brown
716 Hart Senate Office Bldg.
Washington, DC 20510

Congressman Scot McInnis
512 Cannon Office Bldg.
Washington, DC 20515-0603

Senator Ben Nighthorse Campbell
3880 Russell Senate Office Bldg.
Washington, DC 20510

Custer County Action Association
P.O. Box 552
Westcliffe, Co 81252

RESPONSES TO COMMENTS

Response to Comment No.3

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

Response to Comment No.4

The fire potential associated with aircraft overflights is generated from the potential for an aircraft crash or the use of flares in training. The EIS evaluated the potential for an aircraft crash resulting from the proposal. This evaluation determined that the likelihood of an aircraft crash would be very low. Therefore, the potential for a fire resulting from an aircraft crash would also be very low. In fact, military accidents have declined in the past decade, as described in the February 1996 report of the General Accounting Office, an organization under the U.S. Congress.

Authorized users of the airspace have proposed the continued use of flares in their training. However, the flares would not be released below 2,000 feet AGL. Once a flare is released, it ignites immediately. The burn time for a flare is approximately 4.0 to 4.5 seconds. In those 4.0 to 4.5 seconds, the flare falls approximately 500 feet. This leaves a safety margin of approximately 1,500 feet to allow for a flare that burns for more than 4.5 seconds to extinguish itself. The 140 WG has no knowledge of any fires being caused by flares released during current training missions by any aircraft utilizing Colorado Airspace Initiative airspace.

Response to Comment No.5

In order to address concerns regarding possible devaluation of real estate, the EIS evaluated historical data for property values. This analysis compares counties within the study area for the CAI, including those areas with currently utilized military airspace, to counties outside the study area. The results indicate that all counties experienced increases in property values. Further, in terms of median property values, counties within the study area for the CAI increased 99.71 percent compared to counties outside the study area, which increased 57.74 percent. Whereas a report published by the Federal Aviation Administration concludes "that noise has been shown to decrease the value of property by only a small amount--approximately 1 percent decrease per decibel (DNL)," this analysis applies to airport/airfield environments and not land areas underlying military training airspace. Therefore, although it is not possible to absolutely conclude that counties experiencing military aircraft overflights incur any greater change in real estate values than counties not experiencing similar overflight activity, it is not likely that real estate values would drop as a result of the CAI.

14 May 1996

Air National Guard Readiness Center
Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews Air Force Base, MD 20762-5157

Dear Sir,

I am writing as a concerned citizen and resident of Custer County, Colorado in response to your request for reactions to the Environmental Impact Statement for the Colorado Airspace Initiative.

If the intent of the report was to impress the reader with the sheer volume of material then it was an unequivocal success. If, however, the intent was to respond to the many expressed concerns of the citizenry, then I would declare it a total failure.

The quality of research can often be judged by the qualifications of the workers, their ability to clearly express what it is they have done and how the results are interpreted, and finally the thoroughness of the search for pertinent reference material.

Let me comment on the latter. Volume II Appendices lists 613 bibliographic references over one-half of which seem to have little or no relationship to the study and include such oddities as: Morrison, J., undated. Powwows of the Proud: Monitor Publishing Co., 1993, State Yellow Book. Vol. V, #2: Colorado Governor,s Office, undated. "Need Help", Denver, CO.; University Press ofKansas, 1993, Catalogue. Lawrence, KS.; and finally an entry for Webster, Noah, 1972. Webster's New Universal Unabridged Dictionary, Deluxe Second Edition, Dorset and Baber, Cleveland, OH.

Volume I is more conservative and includes a mere 158 references which include more substantial studies but at the same time tantalizes the reader by constant reference to "letters and personal conferences with various individuals" and then one often cannot follow up on these in the text. For example, Enderson 1994a Enderson, James. The Colorado College. 1994. Letter to Brian Hoppy, Science and Engineering Associates, Inc. (SEA). September 9, 1994. This should certainly have been reproduced in the Appendices and the reader is left wondering just what impact do the flights have on the Peregrine Falcon? I phoned Dr. Enderson and he can't remember writing a letter to Mr. Hoppy but offered to search his files.

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1

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

Comment noted. Text changed in Subsections 3.8.2.3 and 3.9.2.3.

Response to Comment No.3

The EIS is organized so that each environmental resource area, such as earth resources or water resources, is analyzed for each of the individual airspace components included in each of the alternatives addressed in the EIS. The purpose of Section 3 is to describe the potentially affected environment associated with each airspace and present baseline conditions for the study area. This information is then used to assess potential impacts, which are presented in Section 4 of the EIS. No conclusions regarding adverse impacts are presented in Section 3.

Pierre Shale is the correct name for the aquifer located in the ROI.

Response to Comment No.4

The ANG adheres to its "Policy on Air National Guard Overflights of Designated Wilderness and Wild and Scenic Rivers," as presented in Appendix L. This policy is intended to protect specifically identified areas, such as the Sangre de Cristo and Greenhorn Mountain Wilderness Areas, by limiting training operations to no lower than 2,000 feet above ground level whenever possible unless safety of the flight or operational parameters (e.g., weather conditions) may be compromised.

Response to Comment No.5

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

In Volume I, 3-107 and 3-126 it states that "the ROI crosses Florissant National Monument" (no reference to Florissant in Section 8 Index) and then proceeds to erroneously state that the fossils are of "species that lived 500,000 years ago". For the record the Florissant fossil beds are unique in the world and the national monument was established by an act of congress to preserve this irreplaceable record of species that lived 35 million years ago. 2

In Volume I, Section 3, many pages are devoted to environmental effects on both water resources and earth resources and always concludes that there will be no adverse effects caused by the overflights. If so, then why devote time and space to this sort of information? If needed, then it should be more than superficial and should be correct. For example, 3.2.11 states that the "Pierre Shale is a primary acquifer". Shales are notorious as aquicludes because of their almost zero permeability and the Pierre is no exception. 3

Because of population pressures people are turning to wilderness areas in search of peace and quiet. Low level overflights proposed for Great Sand Dunes National Monument, Florissant Fossil Beds National Monument, Mueller State Park,and the Sangre de Cristo Wilderness area, all are disruptive to the purpose for which they were set aside. 4

This study fails to address the "startle factor" created by the noise of jet engines. In the past I have had Air National Guard planes almost take the chimney off my home and on one occasion when I was using a chain saw to trim fence posts one passed overhead so close I could have had a fatal accident. 5

As a tax payer I am not at all satisfied with the quality of the EIS report and hope that in the final revision you respond to at least some of the questions I have raised.

Sincerely,

Wm. A. Fischer

William A. Fischer
6208 County Road 140
Westcliffe, CO 812522

14 May 1996

Ned Freestone
1096 County Road 192
Westcliffe, CO 81252
719-783-9770

Dear Sirs:

My Name is Ned G. Freestone. Along with my wife, Jean, we own a small horse ranch in the Wet Mountain Valley of Colorado right in the proposed path of the low level jet fighter flights.

We specialize in safe, good broke trail horses. If you have guts enough, I would really enjoy having you come down here, get on one of our horses, then have one of your jet fighters fly over at 500 feet. From past experience I can almost guarantee that one of two things will happen. The horse will either blow up and go to bucking or he will run off. If you can stay on him you will probably be all right. 1

In the event you do not stay on him, in all likelihood, we will try out our new 911 system and while we are waiting for the ambulance, quite possibly you will have time to reflect on our position that we do not want flyovers in the first place. 2

Sincerely,

Ned G. Freestone

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RESPONSES TO COMMENTS

Response to Comment No.1

It is possible that aircraft noise could startle domestic animals in close association with humans (e.g., penned animals) and cause injury to humans or the animals. However, animals have been shown through numerous studies to adapt and habituate to various sound sources, including jet aircraft noise. Because the CAI airspaces involved where humans and domestic animals are in close association are also mostly existing airspace that have been utilized for over 25 years, this adaptation and habituation to jet aircraft noise has likely already occurred.

Response to Comment No.2

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Nada Hermitage
Box 219
Crestone, CO 81131
(719) 256-4778
FAX: 256-4719

Nova Nada
Kemptville
Nova Scotia B0W 1Y0
(no phone)

THE SPIRITUAL LIFE INSTITUTE

Response to the Draft Environmental Impact Statement of the Colorado Airspace Initiative

Air National Guard Readiness Center
Program Manager, CAI EIS
ANGRC / CEVP
3500 Fetchet Ave.
Andrews Air Force Base, MD 20762

May 14, 1996

To Whom it concerns:

I recently read the DEIS (particularly those sections dealing with VR 413) prepared for the Colorado Airspace Initiative, as well as Dale Ahlquist's (Director, National Airspace Coalition) response. I am in agreement with Mr. Ahlquist's assessment, and would sincerely hope that the EIS deal thoroughly, and substantively with his critique. In particular I would like to reiterate some of his concerns that we would especially like to see addressed. (The numbers in parentheses refer to page numbers of Mr. Ahlquist's response.)

1) Why were none of the three alternatives submitted to the ANG (all of which suggested the elimination of Airburst "C") evaluated by the DEIS? (8) — 1

2) Why the emphasis on low-level training? (11) — 2

3) Why were FICON guidelines used to assess the impact of noise (which is the major concern of members in our community) when these guidelines are admittedly inadequate for use in rural areas? (13-18) — 3

4) Why does the DEIS differ so greatly from the Colorado Division of Wildlife with respect to the impact of the CAI on wildlife? (21)

5) Why were the findings of Eric Nickell and Prof. William Weida on socio-economic impacts not addressed in the DEIS? (28) — 4

6) Finally, and of greatest concern to us, why did the DEIS not deal substantively with the impact of VR-413 on the religious/cultural resources in the Crestone-Moffat area? (27) — 5

RESPONSES TO COMMENTS

Response to Comment No.1

The recommendations from the Working Group, presented in Appendix F, were used to develop the Preferred Alternative. Many of the airspace recommendations included in the Working Group Alternative were incorporated verbatim into the Preferred Alternative and significant portions of the other recommendations also were adopted into the alternative. As such, these recommendations are consequently evaluated in the EIS. The airspace configuration components not adopted were only eliminated after air traffic or environmental conflicts were identified that made their inclusion not feasible. The proposed configuration of military airspace and the route structure were then coordinated with Federal Aviation Administration representatives and is based on its ability to meet existing U.S. Air Force training requirements. The configuration of military airspace for the alternatives considered, including the Preferred Alternative, was derived in part by available unobligated airspace and was designed to avoid airports, instrument approaches, major airways, and known environmentally sensitive areas. The Working Group Alternative has played a very prominent role in the formation of the Preferred Alternative addressed in the EIS.

Response to Comment No.2

Low-altitude flights allow pilots to learn to avoid detection and to survive in combat. Low-altitude flying provides a significant operational procedure through which detection can be minimized. Training is essential to acquire the skill to use this procedure. Specific combat conditions that allowed high-altitude operations in the Gulf War may not exist in future conflicts. The need for this training is required by Air Force training regulations.

Response to Comment No.3

The approach used in the EIS has been modified. The Federal Interagency Committee on Noise (FICON), representing a variety of Federal agencies with a mix of concerns associated with aircraft noise, reviewed aircraft noise analyses issues in 1992. This committee's report (FICON 1992) continued an approach to evaluating relative impacts associated with aircraft noise that has been recognized by noise analysis experts as the most widely endorsed and comprehensive approach to aircraft noise analysis available. This approach to noise analysis was incorporated into the analyses associated with the Draft EIS. In general, Federal land use compatibility criteria are derivatives of guidelines first devised for land near airports. All land use compatibility is based on the use of Day-Night Average Sound Level (abbreviated as DNL or Ldn) as the descriptor representing community noise environments. The criteria treat areas below DNL 65 dB as compatible for all uses, including residential, and they treat DNL 65 dB as a threshold for significant exposure. There is no generally accepted method for treating rural areas differently for these purposes.

However, many EIS reviewers, including some members of the Federal regulatory community, felt the application of the FICON standards, and the 65 dB threshold, to a rural setting was inappropriate for such areas with more quiet ambient noise conditions. Consequently, the use of the 65 dB threshold as the sole means to assess relative impacts or the acceptability of noise levels associated with aircraft operations addressed in the EIS has been modified and the analysis now includes additional information to evaluate potential impacts.

Response to Comment No.4

Papers received during the scoping process, such as the documents prepared by Mr. Nickell and Mr. Weida, have been considered during the preparation of the Draft EIS. These papers, which were not from a published source and consequently not peer reviewed, were not used to support the analysis. Such unreviewed documents from stakeholders do not carry the same credibility as the many other sources of information available to the EIS preparers.

A few final points:

Throughout the DEIS ran the phrase, "There would be no unavoidable adverse impacts..." If one drives a car into a tree, the car will crash. In that situation there would be "no unavoidable adverse impacts" given the initial decision to drive into the tree. Thus, the DEIS is not saying that there will be no impact from the CAI, no even that the impact will necessarily be minimal, merely that the impact that will occur is unavoidable. 6

When I first arrived in the San Luis Valley thirteen years ago, military flights were frequent, low, and loud. In the past four years this has not been the case, even less so during the preparation of the DEIS. I would like to attribute this to a sympathetic response to the valid concerns expressed by the citizens of the valley. Is this so? I remain skeptical. 7

Throughout history, most civilizations have collapsed not primarily by military defeat, but by spiritual and moral decay (the fall of Rome being the most outstanding example). Thus, we of the Spiritual Life Institute, as well as other religious communities in the area, are even more involved in the defence of our country than the Colorado Air National Guard. We have no objection to them doing their job, as long as they let us do ours. 8

We are grateful for the opportunity to respond to the DEIS, and look forward to a more complete consideration of the issues raised in the Final EIS.

Sincerely,

Bro. Eric Haarer
Spiritual Life Institute

cc
Dale Ahlquist, Director, National Airspace Coalition
Ellie Mueller, Open Space Alliance

Response to Comment No.5

The EIS has evaluated cultural resources, such as historic or Native American sites, by consulting with the appropriate state representatives and local experts to obtain an understanding of the resources present in the study area and to determine whether any possible impacts exist. Some religious and/or meditation centers are under existing airspace. Consequently, the elimination of VR-412 and the changes to VR-413 under the Preferred Alternative, which raises the minimum altitude from surface level to 500 feet above ground level and reduces the route width from 12 miles to 6 miles, should be beneficial to such locations.

Response to Comment No.6

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.7

The frequency of training flights that have been observed by the public represent normal operations needed to fulfill USAF training requirements.

Response to Comment No.8

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

William H. Hudson - Eleven Westpoint Road - Colorado Springs, Colorado 80906

May 14, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

Subject: Colorado Airspace Initiative

Dear Sir:

I am a home owner in the Wet Mountain Valley, Custer County. We have waited to have the results of the DEIS concerning the objective effect on the valley of the purposed MOA and MTR only to find that it is at best amateurish or at worse incompetent. It certainly is not objective.

In my 8th grade statistics class, my teacher gave the example of a man whose head was in a 500 degree oven and his feet in a bucket of liquid air. "Statistically" he was quite comfortable because the average temperature was 85 degrees. The teacher used this as an example of the misuse of statistics because the man never experiences the "average temperature". Here we are 50 years later and the U.S. Air Force is using statistics that any 8th grader knows is false when measuring the effects of jet noise. The report is replete with other examples of false application of statistics.

There are two possible explanations for this: 1) The Air Force doesn't know the statistics are meaningless or 2) The Air Force thinks that we are so stupid that we will swallow anything that looks official. I am tempted to think it is the latter. 1

Since the beginning more than two years ago, the Air Force attitude has been one of total arrogance, deception and guile. This ridiculous EIS is just another example.

The conclusion that there is "no impact" is so obviously wrong that it would be laughable if not so serious. That the residents who have lived under the MOA for all these years should rise up en masse and say "no more" is undeniable proof that there has been an impact. For the EIS to say no "impact" is again an arrogance to imply that these people are hallucinating. The overflights have decreased enormously since the polemic began. I am convinced this is on purpose with the forlorn hope the people will forget the "impact". 2

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

The frequency of training flights that have been observed by the public represent normal operations needed to fulfill USAF training requirements.

Response to Comment No.3

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

Response to Comment No.4

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

I hereby request that the DEIS be rejected as invalid and that the Airburst MOA, La Veta MOA and all MTRs leading to the Airburst Range be eliminated in the absence of proof of no adverse environmental impact and lack of good faith on the part of the Air Force in dealing with citizens of the United States. 3

On a personal note, I am deeply disappointed in the behavior of the Air Force in this matter. The high-handed, arrogant attitude is not typical of the several retired four stars that I have personally known or know. It is not good news for the Air Force and the defense forces in general. Is it any wonder that fringe groups are beginning to resist what they perceive as an increasingly intrusive and threatening government ? To use the language of Total Quality Management so prevalent in the private sector ---LET'S NOT FORGET WHO THE CUSTOMER IS !! 4

Sincerely,

Copies to:

Governor Roy Romer
Senator Hank Brown
Senator Ben Nighthorse Campbell
Congressman Scott McGinnis
Robert Sinderhauf

May 14, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, Md 20762-5157

Dear Sir,

How can you compare the sound of jet engine roar with the rustle of the wind in the tall grass, and trees. Our world is too full of engine sounds, and not enough places to hear what it's like without them.

With our population ever expanding, and building, why not fiercely protect our shrinking quiet spaces where people come to refresh themselves, and others are living because they treasure that environment. 1

The Colorado Airspace Initiative is a misplaced priority of territory in the sky. Who would think that the counties affected would have to fight noise pollution so far from the source, and when the sky is so high, the planes must practice so close to the ground. 2

I have fear because a small number of people are asking to stop these invasive manuvers, but I hope that our voices will be powerful enough to be heard with the value of what we say. We must try to protect these special places for everyone. 3

Respectfully,
Carole Kowalski

Carole Kowalski
18210 Pinon Park Rd.
Peyton, Co. 80831

252

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

Noise from aircraft operations contributes to the overall noise burden on the environment generally referred to as "noise pollution." Military aircraft operations contribute to this burden. Widely accepted means to measure and judge the severity of "noise pollution" do not exist; however, the means to measure or model noise levels does exist. This EIS provides an evaluation of the noise levels associated with military aircraft operations. These levels, when combined with other sources of noise within the environment, contribute to "noise pollution."

Response to Comment No.3

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

May 14, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

Re: Colorado Air Space Initiative-Draft Environmental Impact Statement

Dear Manager:

We are writing to express our displeasure with the proposed military training flights over the Wet Mountain Valley. We are residents of this valley and do not want our peace and quiet disrupted by noisy jets overhead. That is what we and alot of other residents moved away from! This is our personal view. 1

From a broader perspective, we believe that disturbing the natural solitude of this spectacular valley would be almost sacriligious. People by the thousands come to this valley every summer just because it is a respite from the noisy work-a-day world in which they live. They need to gaze on big open valleys and high rugged snow-capped peaks; to see wildlfe in its undisturbed state; to hear the murmur of wind in the pines, the rush of a clear mountain stream. It is important that we preserve some places that just aren't noisy and busy. People need a place to regain their sanity, a place where they can once again get in touch with nature, to be recreated. Noisy jets just are not conducive that that scenario. 2

If it is your intent to raise the anxiety level of Coloradoans then by all means fly your jets over this valley, but if you are concerned about the human quality of life, then please look elsewhere for your MOAs and MTRs. We realize the necessity for training, but we are asking you to recognize the necessity for places of serenity and tranquility. We really believe that more appropriate training grounds can be found. This is truly a unique valley. If you have not taken a tour we would highly recommend it before you ruin it. If you are truly reasonable people(which weassume you are, otherwise we would not be writing this) and if you were to visit this valley we know that you could not possibly persist in this proposal. Our fate rests in your hands; choose wisely. 3

Sincerely

Daryl Kuiper

Lynnee Sullivan-Kuiper

253

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Response to Comment No.3

The use of other training areas was examined as part of the development of the alternatives studied in detail in the EIS in Subsection 2.3. The proposal was designed to minimize conflicts with potentially sensitive areas while providing the training resources necessary to meet military readiness requirements. Specific narrowing criteria for the selection of military training airspace (see Subsection 2.3.3 in Volume I) were used to evaluate other locations, and no alternative training areas were identified that could be substituted for the airspace configuration proposed in the alternatives studied in the EIS.

The primary user of the airspace included in the Colorado Airspace Initiative is the 140 WG based at Buckley Air National Guard Base in Aurora, Colorado. Because of limited resources and aeronautical constraints, virtually all of our nation's fighter units train in airspace that is within a "tank of gas" of the aircrews' base.

May 14, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Ave
Andrews AFB, MD 20762-5157

To whom it may concern,

This letter is response to the issue of the Air National Guard increasing the airspace over the Sangre de Cristo Mountain valley and surrounding areas.

I understand the need for a strong military, I am a veteran of both the Army and the Air Force I know the inherent dangers of low flight, and general military maneuvers. Proposing a flight territory of over a populated area is not only dangerous to those individuals living there, but I believe it will have a significant impact on the wildlife and vegetation in the area. Not only will the noise have an impact on the people, but the increase air pollution is something we don't need either. 1 2

I personally own 40 acres in this area and decided to purchase this property specifically due to the solitude and beauty the area provides. I consider the possibility that the military's decision to expand their flight territory personally repulsive and totally irresponsible on their part to do so. Being a Veteran I know that the military only does what is in the best interests of "the military", they will lie about every aspect of what they are proposing to get what they want. What they are proposing is a **complete and utter disregard** for the individuals who have spent their hard earned money to purchase property and build houses with the idea of possibly retiring in the Sangre de Cristo valley. 3

In closing, I will do everything in my power to spread the word to all my voting friends, my 800 patients and as many media personnel as will listen. There are other territories that can be exploited for this purpose that would not create such a danger to the environment and those living in it. I suggest the military look elsewhere to play their war games. There is no way the military can guarantee the safety of those living in this area. 4

Sincerely,

Dr. James Lembeck

cc: Custer County Action Association
Senator Ben Nighthorse Campbell
Congressman Scott McInnis
Senator Hank Brown
Governor Roy Romer

25

4

RESPONSES TO COMMENTS

Response to Comment No.1

Studies conducted on wildlife have shown that numerous wildlife species have the ability to adapt to the presence of man and various man-made sound sources, including jet aircraft noise. While the noise generated from low-altitude military overflights may be initially startling, habituation to jet aircraft noise occurs with most wildlife species. Species-specific responses to low-altitude overflights vary considerably, and responses from individual animals may have the potential to cause injury. However, wildlife populations are usually affected only when a variety of factors work in combination to impact them, including declines or fluctuations in the availability of a food source, habitat destruction or alteration, predation, hunting, trapping, poaching, disease, or inclement weather, rather than noise alone. Normally, it would be unrealistic to predict or attribute any wildlife population declines to a single stressor, such as noise. In addition, no published scientific evidence was identified that indicated harm may occur to wildlife as a result of exposure to the levels of noise generated by military aircraft that would utilize the airspace associated with the Colorado Airspace Initiative.

Response to Comment No.2

The EIS evaluated aircraft air pollution resulting from each of the alternatives studied in the EIS using scientifically validated emissions modeling tools designed to predict ground-level pollutant concentrations. The total air pollution emissions from the 140 WG would be reduced under the Preferred Alternative and the Original Proposal as compared to existing conditions, because the total number of flying hours would be reduced from 5005 to 4600 hours. The cumulative air pollution concentrations, as determined through computer modeling for each of the airspace segments, could increase or decrease depending upon a variety of factors. These factors include the type of aircraft using the airspace, their altitude, frequency, power setting and meteorological conditions rather than a strict proportional relationship to the number of sorties flown. Nonetheless, under the worst case scenario modeled for each airspace segment under each of the alternatives, no air pollution concentrations resulting from aircraft operations would cause any local area to be out of compliance with Federal or state standards or make any significant impact on air quality in any area. Also, when comparing these air pollution concentrations with Federal and state limits for the Prevention of Significant Deterioration (PSD) in air quality, all levels were far below minimums.

RESPONSES TO COMMENTS

Response to Comment No.3

Because of the many avenues through which the public has received information on the CAI, including both factual and nonfactual information from various sources, some confusion may exist about the existing airspace and proposed new airspace, particularly for the Wet Mountain Valley and the San Luis Valley. The La Veta MOA is an existing airspace. No changes are proposed for this airspace.

VR-413 is also an existing airspace; however, under the Preferred Alternative, its width would be reduced in size and its eastern boundary moved away from the Sangre de Cristo Mountains. The minimum altitude would be raised from surface level to 500 feet above ground level. VR-412, which is currently a low-altitude route through the Wet Mountain Valley, would be eliminated altogether under the Preferred Alternative, thus eliminating low-altitude training completely from the Wet Mountain Valley. Sorties over the Wet Mountain Valley also are reduced under the Preferred Alternative.

Response to Comment No.4

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Norman J. Mullen
P.O. Box 2583
Grand Junction, CO 81502
(303) 243-0002

May 14, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Ave
Andrews AFB, MD 20762-5157

Re: Colorado Airspace Initiative

Sir or Madame:

Please include these comments in the record for the Draft Environmental Impact Statement for the Colorado Airspace Initiative.

I am strongly opposed to the number of and noise from flights analyzed in the DEIS. I have hiked in the Sangre de Cristo Mountains (US Forest Service Wilderness), in the Great Sand Dunes National Monument, in the Beaver Creek (BLM) area southwest of Colorado Springs, and in the Wet Mountains (Forest Service). 1

I plan to visit the Pinon Canyon area of the Purgatoire River in the near future.

I value these areas because of their wildlife and natural vegetation, their recreation opportunities, and their peace and quiet.

The 65 decibel day-night average used to determine significance in the DEIS is ridiculous. 2 The use of jets in these relatively pristine areas destroys the solitude, and ruins the experience. 3

I ask you not to allow flights above the above areas. Specifically, I request that the LaVeta and Airburst MOAs and VR 413 be eliminated, along with other MTRs leading to Airburst. 4

Thank you,

xc. Gov. Roy Romer

256

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

Response to Comment No.3

The ANG makes every effort to protect designated wilderness areas from aircraft noise. Non-designated areas and general lands under the jurisdiction of the Bureau of Land Management that may be viewed as pristine areas to many citizens carry no special protections from man-made noise sources. Should specific sensitive areas or noise receptors be identified, procedures may be implemented to provide avoidance of aircraft overflights of these areas.

Response to Comment No.4

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

Charles H. Peckham
POB 1429
Silver Cliff, CO
81249

May 14, 1996

Program Manager CAJ EIS
ANGRC/CEVP
3500 Fetcher Ave.
Andrews AFB, MD
20762-5157

SUBJECT:-
Colorado Airspace Initiative-Draft Environmental Impact Statement

Dear Sirs:

We started spending summers in the Wet Mountain Valley eight years ago, and moved here full time last year.

The reason we moved here was to get away from city problems; traffic, overcrowding, crime, and **NOISE.** When I woke up this morning the loudest sound I could hear was a meadowlark in a tree near the house. 1

It has not always been this way. When we first started coming back here, there were low level military flights over our house and out in the valley. We were hiking in the mountains when a jet came over very close to the ground, and scared us, and friends with us, so much that we all hit the ground. The dog that was with us was terrified, and we spent the rest of the afternoon finding him.

These flights have not been around the last five years, and many retired people like us have moved here to enjoy the country tranquility.

We **DO NOT WANT** these MOA and MTR flights again. The draft EIS which averages noise over 24 hours and compares our noise level to some downtown, big city location is a bad joke. Here where we go from almost total silence to a jet scream, it makes the noise even more noticeable. 2

I am not a military protestor. I served three years in the Army, including time in Korea, in the middle 1950s. I feel that the Air National Guard is an important part of our national defence. But I also feel that there are several MOA locations near enough to use instead of here. We are a rural area, but growing faster than almost anywhere else in the country.

As tax paying citizens, I feel that our opinions count, and that our voices should be heard and given due consideration.

Sincerely,

Charles H. Peckham

cc:-Senator Hank Brown
Senator Ben Campbell
Congressman Scott McInnis

038L

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

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May 14, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Ave
Andrews AFB, MD 20762-5157

To whom it may concern,

This letter is response to the issue of the military increasing the airspace over the Sangre de Cristo Mountain valley and surrounding areas.

I personally own 40 acres in this area and decided to purchase this property specifically due to the solitude and beauty the area provides. I consider the possibility that the military's decision to expand their flight territory a personal affront and totally irresponsible on their part to do so. This is a blatant disregard for the individuals who have spent their hard earned money to purchase property and build houses with the idea of possibly retiring in the Sangre de Cristo valley. 1 2

We understand the need for a strong military but proposing a flight territory of over a populated area is not only dangerous to those individuals living there, but I believe it will have a significant impact on the wildlife and vegetation in the area. Not only will the noise have an impact on the people, but the increase air pollution is something we don't need either. 3 4

In closing, I will do everything in my power to spread the word to all my voting friends and as many media personnel as will listen. There are other territories that can be exploited for this purpose that would not create such a danger to the environment and those living in it. I suggest the military look elsewhere to play their war games. There is no way the military can guarantee the safety of those living in this area. 5

Sincerely,

Becky Tompkins

cc: Custer County Action Association
Governor Roy Romer
Senator Hank Brown
Congressman Scott McInnis
Senator Ben Nighthorse Campbell

259

RESPONSES TO COMMENTS

Response to Comment No.1

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

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Response to Comment No.4

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Response to Comment No.5

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

5-15-96.

Abigail David
Box 191
Crestone, CO
81131

Program Manager— CAI-EIS
Air National Guard Readiness Center
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD
20762-5157

Re: Written Comment
upon Colorado Air National Guard
D.E.I.S. of March 1996, Vols. I, II.
re. VR-413

Dear Program Manager, CAI EIS:

After reviewing the Draft E.I.S. and thinking further on the VR-413, I have come to the conclusion that an M.T.R. should not pass through this, the San Luis Valley—for the following reasons.

I'll try to make this letter as brief as possible.

Preferred Alternative (see D.E.I.S. 2-28 and Fig. 2-16) states surface AGL 500 feet, and maximum altitude 3,000 ft. between Points B and H, which includes moving through this valley (from Point D to E). The route is 3 miles right and left of centerline. 1

This route for the most part parallels Highway 17. Along Hwy. 17, underneath the flyway are towns: Villa Grove, Moffat, Hooper, and Mosca. The children (Kindergarten through 12th Grade) from my community, Crestone, attend Moffat Public School. Homes, businesses, the school, and ranching homes are underneath an airway, whose purpose is military, war-preparatory training.

This is my primary objection: extraordinarily fast and noisy—and dangerous—military aircraft flying 500 feet to 3,000 feet over the citizens of this valley. And our children's school.

(more)

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RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Written Comment from Abigail David.
Colorado Air Natl. Guard D.E.I.S.

In addition, I ask you to consider the following:

① F.A.A. flying restrictions, and military flying restrictions, please see D.E.I.S. (Vol. I) page 4-260, require "avoid[ing] flying lower than 1,000 feet . . . when over a congested area, such as a city, town, or settlement, or over any open air assembly of people." (i.e., football, baseball, etc., games).

Thus, with the aircraft moving at exceedly high speeds and the towns and settlements (there is K-V subdivision north of Moffat, for example) and strung along Hwy. 17 about every 10 or 15 miles, the aircraft would have to fly a minimum of 1000' AGL. Not 500 AGL. 2

② The past experience, before this A.N.G. E.I.S. process began has been that pilots, instead of "bubbling up" over towns and settlements, have chosen too often to "buzz" the towns, homes, and even have been seen to "buzz" (fly very low) over cars and trucks moving along VR. 413 / Hwy. 17.

③ Before this process (A.N.G. E.I.S.) began, we, in the Crestone-Baca Grande (a subdivision south of Crestone) along the eastern flank of the San Luis Valley had both homes and vehicles "buzzed" by pilots. (Not often, however, in the last 2 years.) 3

- A friend, working on a roof, tells me he almost lost his balance as he was startled by a low-flying military jet aircraft.
- Another friend tells me her 2-year-old son was so frightened by jet noise from low-flying planes that it took close to an hour to restore his equilibrium. The sound was trapped and amplified within the home. The startle effect on young children and pregnant women is well documented.

(more)

RESPONSES TO COMMENTS

Response to Comment No.2

The ANG and 140 WG recognize the congestion along Highway 17.

Response to Comment No.3

Pilots must train for combat readiness; however, the Federal Aviation Administration and the USAF have strict rules to ensure pilots operate their aircraft in a safe manner. The rules govern minimum altitudes, maximum speeds, and type maneuvers that can be performed inside and outside designated training airspace. Any misconduct by a military pilot is a serious matter and commanders have the authority to suspend pilots who willfully violate flight rules or operate in an unsafe manner.

Written Comment from Abigail David.
COL. AIR NAT'L. GUARD D.E.I.S.

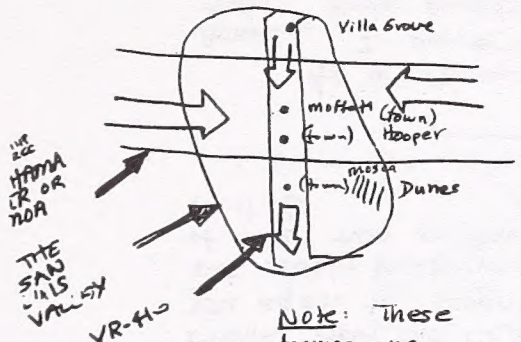
page 3.
5-15-96.

④ The "Preferred Alternative" is 176 sorties, instead of 100 sorties (Vol.I, page 2-26).

I sincerely feel no sorties should be flown over this increasingly-populated valley. 4

⑤ The valley already has a U.S. Air Force mid-level M.T.R. moving across (east-west) The Valley: the Chama M.T.R.* I am told — at 1800 feet — 2900 feet AGL.

Thus, collision of military aircraft is possible. If VR-413 jets in fact, since towns and settlements are so close, are needing to fly at 1,000 ft. AGL, and if some of the Chama aircraft are flying 1800 ft. AGL, that is only 800 feet between the two lanes.



Note: These towns are only an average of 15 minutes distance from one another

(* The Chama may be an M.O.A. instead of an M.T.R.) 5

Either way, 3 or 4 weeks ago, I recorded direction and estimated height of generally east-west military jets for about an hour in the area north and to the south of me (Baca Grande) (as well as directly over me): they flew either way on an average of every 6-7 minutes, and most appeared to be at 2,000 or 2,200 feet above the valley floor (and approx. 6,000+ feet above the Sangres).

My count, 1 jet per every 6-7 minutes, is typical of other counts I've made in the past 2-3 years; I have written or phoned the CANGuard 2 or 3 times.

(more)

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RESPONSES TO COMMENTS

Response to Comment No.4

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.5

The military does not schedule nor manage any airspace between 1,800 feet and 2,900 feet AGL oriented east-west in the Villa Grove/Moffat/Hooper area. The La Veta High MOA (the western border of which is approximately 20 miles east of those towns) is the nearest military managed airspace in which aircraft are authorized to fly in an east-west direction and at the altitudes described in the comment. The term "Chama" refers to MOA-type airspace above 18,000 feet mean sea level.

Written Comment from Abigail David.
Col. Air Nat'l Guard D.E.I.S.

page 4.
5-15-96.

6 The Draft E.I.S. has not taken into account the cumulative effects of two (VR-413 and U.S. Air Force Chama M.T.R. or M.O.A.) military war-maneuver practice areas in this particular valley.

Already, dbs are high in the Crestone-Baca Grande from the Chama activity. As well, I ask you again to recognize not only noise excesses but safety problems from the close proximity of the two military fly-over zones as per my point ⑤.

As a citizen of the United States of America, I support proper training of military pilots. World conditions, at this point of time, require a ready and well-trained Air Force and Air National Guard. I am not against M.O.A.'s and M.T.R.'s; I believe they are necessary for training. I am the daughter of Lt. Harold W. David, U.S. Navy, who was an aircraft carrier briefing officer for a squadron of flyers off the U.S.S. Bennington in World War II.

I also know that the A-N. Guard and the U.S. Air Force at present control for training and other purposes, more than 50% of our nation's skies. Thus, can drop VR-413 without harm.

I believe that military training of jet pilots is dangerous in its very nature, and that this kind of combat training must not occur any longer in this valley—especially the VR-413 flying at lower altitudes.

6

Not to mention the fact that two responsible parties have recommended that VR-413 be discontinued, to wit: —

(more)

2
64

RESPONSES TO COMMENTS

Response to Comment No. 6

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Written Comment from Abigail David.
Col. Air Nat'l. Guard D.E.I.S.

1. The Colorado Airspace Initiative Working Committee, charged by Governor Roy Romer to find viable alternatives to COANG's training needs, recommended that VR-413 "be deleted in its entirety and the sorties proposed for VR-413 assigned to VR-416" OR "configure the route to provide entrance into the Airburst Range from the West without crossing the Arkansas River. (See D.E.I.S., Vol. II, pg. F-57, Recommendation. May 27, 1994," proposed by the above Working Committee. Also, Fig. 1 on pg. F-62.)

Either way, no M.T.R. moves down the center of this valley. — 7

2. The State of Colorado Division of Wildlife in its "Scoping Comments" found in a letter dated September 14, 1993 (letter page 9) (Appendix K of D.E.I.S., Volume II, 8th letter in that appendix) that certain M.T.R.'s pose deliterious effect on wildlife, stating on the letter's last page that "CDOW feels such conflicts can be avoided by abandoning MTRs such as IR-413." [referring to VR-413].

In short certain M.T.R.'s and M.O.A.'s are hazardous to wildlife. — 8

The two above alternatives are not discussed as viable alternatives in Volume I of the D.E.I.S. It is as if the Working Committee and Colorado Div. of Wildlife said nothing.

Thank you for your attention. I'd like to see our pilots well trained and this San Luis Valley free of low-flying military training routes; fair to both our pilots and to our region's people, animals, and birds — but especially, your fellow citizens residing here.

Truly,

Abigail David

(Ms.) Abigail David.
San Luis Valley resident.

cc: Open Space Alliance. Crestone, Co.

RESPONSES TO COMMENTS

Response to Comment No.7

The recommendations from the Working Group, presented in Appendix F, were used to develop the Preferred Alternative. Many of the airspace recommendations included in the Working Group Alternative were incorporated verbatim into the Preferred Alternative and significant portions of the other recommendations also were adopted into the alternative. As such, these recommendations are consequently evaluated in the EIS. The airspace configuration components not adopted were only eliminated after air traffic or environmental conflicts were identified that made their inclusion not feasible. The proposed configuration of military airspace and the route structure were then coordinated with Federal Aviation Administration representatives and is based on its ability to meet existing U.S. Air Force training requirements. The configuration of military airspace for the alternatives considered, including the Preferred Alternative, was derived in part by available unobligated airspace and was designed to avoid airports, instrument approaches, major airways, and known environmentally sensitive areas. The Working Group Alternative has played a very prominent role in the formation of the Preferred Alternative addressed in the EIS.

Response to Comment No.8

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

040L Abigail David

J. Lamb-Archuleta
P.O. Box 34
Gardner, CO 81040
May 15, 1996

Re: Colorado Air National Guard/ U.S. Air Force
DEIS (Draft Environmental Impact Statement)
for the CAI (Colorado Airspace Initiative)
to modify/create military airspace over
Huerfano County, Colorado (CAI-EIS)

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Air National Guard Readiness Center
Program Manager, CAI-EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

Dear Program Manager:

I am dismayed that the DEIS seems to be nothing more than a whitewash. In spite of being disabled, I attended meetings and put my comments "on the record", only to see that the public is, once again, being ignored. 1

When any aircraft comes over so low that I can see the pilot's teeth, and, most recently, the buttons on his shirt, that is not a reasonable use of airspace of any populated area! I object to the noise, pollution, danger of a crash, and most especially to the fright involved in exposure to random, terrifying, low flights. 2

I urge you to honestly reconsider the very valid objections which have been put on the record, and to restrict any and all use of our airspace to a level which will not ruin our lives.

I have two very specific questions which I would like to see publicly addressed:

1. Why can't the planes go practice over the desert or in somemore northern area that is even less populated than Southern Colorado? 3

2. Why can't the proposal include a minimum of one or two guaranteed days each week that there will be no flights? This would relieve a lot of stress and strain on humans as well as animals, and make the proposal (since I assume the whitewash will continue and it will be put into effect) a lot easier to try to live with. 4

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.3

The use of other training areas was examined as part of the development of the alternatives studied in detail in the EIS in Subsection 2.3. The proposal was designed to minimize conflicts with potentially sensitive areas while providing the training resources necessary to meet military readiness requirements. Specific narrowing criteria for the selection of military training airspace (see Subsection 2.3.3 in Volume I) were used to evaluate other locations, and no alternative training areas were identified that could be substituted for the airspace configuration proposed in the alternatives studied in the EIS.

The primary user of the airspace included in the Colorado Airspace Initiative is the 140 WG based at Buckley Air National Guard Base in Aurora, Colorado. Because of limited resources and aeronautical constraints, virtually all of our nation's fighter units train in airspace that is within a "tank of gas" of the aircrews' base.

Response to Comment No.4

The ANG and other Department of Defense components routinely fly only five days per week. The days flown by the 140 WG are Tuesday through Friday. One weekend per month may also be flown to accommodate traditional National Guard weekend drills.

Response to Comment No.5

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Please do not bother to send me one of your postcards telling me that this letter is being put "on the record". People are getting very angry about your program's apparent lack of listening/reading, not to mention almost complete lack of response to, public comments. I am not writing because I want to become part of the public record -- I am writing because as part of the public, I want the CAI to respect my space! 5

Sincerely,

J. Lamb Archuleta

(Mrs.) J. Lamb-Archuleta

cc: President William Clinton
Vice President Albert Gore, Jr.
Sen. Hank Brown
Sen. Ben Nighthorse Campbell
Rep. Scott McInnis
State Sen. Gigi Dennis
FAA: Paul Gallant

SHIPPED MAY 15 1996

Sy Meheen
225 Summit Drive
Dillon, Colorado 80435

Program Manager, CAI EIS
Environmental Division
Environmental Planning and Air Space Branch
Air National Guard CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

Dear Program Manager,

Please be aware of my objection to the **Colorado Air Space Initiative**.

Being a wildlife biologist and a property owner in Huerfano County, I have many concerns, (specifically with IR-409, IR-415, VR-412 and VR-413) with the MOAS:

1). Current level continuation and/or increasing military jet sorties over pristine Colorado at a time of "government cut backs" appears an unwise budget decision, especially, as the 140th Fighter Wing is facing a reduction in authorized air craft/flight billets (30% or higher). — 1

2). Colorado's tourism based economy cannot profit from increased noise and intrusion into our wild and scenic areas which attract visitors with the solitude and beauty our mountains offer. — 2

3). The Air National Guard planners claim a 40% reduction in NAG training space due to DIA's airspace. Custer County Action Association estimates a 4% loss. — 3

4). Bighorn sheep lambing and elk calving areas exist in the proposed MOAS. Endangered species such as the Bald Eagle, Mexican Spotted Owl, Plains Sharp Tail Grouse and Peregrine Falcon, are known to nest in the MOAS. The NAG DEIS claims "No adverse impacts expected." This speculation cannot be taken seriously! Adverse stress and mortality on indigenous wildlife <u>can</u> be expected: — 4

A). With aircraft elevations at 100 to 300 feet above ground level, bird collisions are bound to occur. These birds airspace is not limited to their nesting sits. — 5

B). Many studies concerning adverse impacts on animals be unscheduled noise events have shown conclusively that animals are stressed and traumatized. One recent study by Canadian Biologist Steve D. Coté from the University of Biology, found the following: Helicopter disturbances altering behavior and feeding patterns in bighorn sheep and mountain goats. Recommendations from the study suggested minimum helicopter distances from sheep at 500 meters and 2 kilometers for goats. It would follow that a more obtrusive aircraft, such as a F-111 or F-16, would require greater distances. — 6

5). Circumstantial damage from concentrated jet exhaust pollutants in previously non-polluted air environment would obviously lower the air quality. — 7

6). FAA estimates property values decrease 1% with each decibel of air traffic noise level increase. So, am I assume my property values will decrease 10 to 14% ? It's interesting to note that recent reduction of Colorado ANG flying activity coincided with huge growth in Custer County. In a 5 year reduced flying period, Custer County experienced one of the biggest proportional population gains in the U.S. The NAG sortie <u>reduction</u> had to be one of the contributing factors in making that area more desirable. — 8 9 10

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If the military powers that be, insist on continuing this absurd pursuit of airspace and flight training they should:1. consider Pinyon Canyon as their primary MOA. Pinyon Canyon use appears to have less impact on population, economics and wildlife. The area is owned in large, by the U.S. Army. 2. Obtain and utilize F-16 flight simulator time at Buckley. Savings on fuel, and maintenance should offset the simulator expense. 12 13

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I **strongly oppose** the Colorado Airspace Initiative, and any attempt to increase low altitude military flights anywhere in the southern Colorado front range and wilderness areas.

Thank you for your time,

Sincerely

Sy Meheen

Sy Meheen

Colorado resident, taxpayer,
and landowner

RESPONSES TO COMMENTS

Response to Comment No.4

The ANG has been and will continue to work with the U.S. Fish and Wildlife Service, the Colorado Department of Natural Resources, the Bureau of Land Management, and other regulatory agencies to study the effects of their actions on threatened and endangered species within the areas affected by its operations. Representatives from these organizations meet periodically in a Coordination Group to discuss and study species of concern. Some ongoing study activities are currently funded by the ANG, including a study with the U.S. Forest Service on the Mexican Spotted Owl. The ANG will continue this cooperative effort and adjust its operations should any of these studies identify potential impacts on any threatened or endangered species.

Response to Comment No.5

Because of the potential for loss of a pilot's life and the high cost of modern military aircraft, avoidance of collisions with birds is extremely important to the ANG. The potential for a bird-aircraft strike would not change significantly under the proposal. Both the Original Proposal Alternative and the Preferred Alternative consist largely of modifications to existing airspace or establishments of new airspace in the vicinity of existing airspace. These actions would, therefore, encompass the same seasonally adjusted bird avoidance procedures associated with the bird migration corridors as are utilized currently with the existing airspace. Due to the fact that only four bird strikes have occurred in existing airspace associated with the Colorado Airspace Initiative in the past five years, the likelihood of future bird-aircraft strikes under any of the alternatives would be expected to be low.

The USAF has established a Bird/Aircraft Strike Hazard (BASH) Team to implement procedures to prevent and reduce the threat of bird/aircraft strikes, and to investigate and track any bird strikes that occur. In addition, each USAF/ANG base or flying unit is required to establish a BASH program to minimize the risk of bird strikes both at the base airfield and in airspace training routes for the unit. The USAF BASH Team assists each base or flying unit by providing Bird Avoidance Model (BAM) graphs. These graphs estimate the relative bird strike risk for flying along a specific low-level route or operations area. The model is developed on the basis of waterfowl and raptor migration and concentration data. The BAM graph depicts the severity of the bird strike hazard at a particular time of day, month, and segment of a low-level route. This information is used by the flying unit to determine the optimum route schedule and avoidance measures to be taken to prevent bird/aircraft strikes. In addition, the unit publishes Notices to Airmen (NOTAM) to alert transient aircrews to specific bird migration hazards, activity periods, and avoidance procedures.

RESPONSES TO COMMENTS

Response to Comment No.6

Studies conducted on wildlife have shown that numerous wildlife species have the ability to adapt to the presence of man and various man-made sound sources, including jet aircraft noise. While the noise generated from low-altitude military overflights may be initially startling, habituation to jet aircraft noise occurs with most wildlife species. Species-specific responses to low-altitude overflights vary considerably, and responses from individual animals may have the potential to cause injury. However, wildlife populations are usually affected only when a variety of factors work in combination to impact them, including declines or fluctuations in the availability of a food source, habitat destruction or alteration, predation, hunting, trapping, poaching, disease, or inclement weather, rather than noise alone. Normally, it would be unrealistic to predict or attribute any wildlife population declines to a single stressor, such as noise. In addition, no published scientific evidence was identified that indicated harm may occur to wildlife as a result of exposure to the levels of noise generated by military aircraft that would utilize the airspace associated with the Colorado Airspace Initiative.

Response to Comment No.7

The EIS evaluated aircraft air pollution resulting from each of the alternatives studied in the EIS using scientifically validated emissions modeling tools designed to predict ground-level pollutant concentrations. The total air pollution emissions from the 140 WG would be reduced under the Preferred Alternative and the Original Proposal as compared to existing conditions, because the total number of flying hours would be reduced from 5005 to 4600 hours. The cumulative air pollution concentrations, as determined through computer modeling for each of the airspace segments, could increase or decrease depending upon a variety of factors. These factors include the type of aircraft using the airspace, their altitude, frequency, power setting and meteorological conditions rather than a strict proportional relationship to the number of sorties flown. Nonetheless, under the worst case scenario modeled for each airspace segment under each of the alternatives, no air pollution concentrations resulting from aircraft operations would cause any local area to be out of compliance with Federal or state standards or make any significant impact on air quality in any area. Also, when comparing these air pollution concentrations with Federal and state limits for the Prevention of Significant Deterioration (PSD) in air quality, all levels were far below minimums.

Response to Comment No.8

In order to address concerns regarding possible devaluation of real estate, the EIS evaluated historical data for property values. This analysis compares counties within the study area for the CAI, including those areas with currently utilized military airspace, to counties outside the study area. The results indicate that all counties experienced increases in property values. Further, in terms of median property values, counties within the study area for the CAI increased 99.71 percent compared to counties outside the study area, which increased 57.74 percent. Whereas a report published by the Federal Aviation Administration concludes "that noise has been shown to decrease the value of property by only a small amount--approximately 1 percent decrease per decibel (DNL)," this analysis applies to airport/airfield environments and not land areas underlying military training airspace. Therefore, although it is not possible to absolutely conclude that counties experiencing military aircraft overflights incur any greater change in real estate values than counties not experiencing similar overflight activity, it is not likely that real estate values would drop as a result of the CAI.

Response to Comment No.9

Data regarding property values for Huerfano and Custer Counties were presented previously in Subsections 4.9.4 and 4.9.8 of the EIS.

Response to Comment No.10

Since 1970, many Colorado counties, including Custer County, have experienced an increase in total population, the number of housing units, property values, and the general local economy. Because many factors contribute to socioeconomic conditions and no absolute link between aircraft overflights and economic changes can be determined, it is not possible to conclude that an increase (or decrease) in building activity is directly attributable to a change in the number of sorties flown. Custer County appears to have experienced growth during periods of high and low aircraft activity levels. A review of socioeconomic conditions across the entire CAI study area does not reveal widespread, repetitive, or consistent patterns. For example, while some counties may have experienced an increase in population, housing, and employment, other counties may have experienced a decrease in these conditions. Additionally, some counties may have experienced a combination of growth in population and housing but a decline in local economic conditions.

RESPONSES TO COMMENTS

Response to Comment No.11

Low-altitude flights allow pilots to learn to avoid detection and to survive in combat. Low-altitude flying provides a significant operational procedure through which detection can be minimized. Training is essential to acquire the skill to use this procedure. Specific combat conditions that allowed high-altitude operations in the Gulf War may not exist in future conflicts. The need for this training is required by Air Force training regulations.

Response to Comment No.12

The use of other training areas was examined as part of the development of the alternatives studied in detail in the EIS in Subsection 2.3. The proposal was designed to minimize conflicts with potentially sensitive areas while providing the training resources necessary to meet military readiness requirements. Specific narrowing criteria for the selection of military training airspace (see Subsection 2.3.3 in Volume I) were used to evaluate other locations, and no alternative training areas were identified that could be substituted for the airspace configuration proposed in the alternatives studied in the EIS.

The primary user of the airspace included in the Colorado Airspace Initiative is the 140 WG based at Buckley Air National Guard Base in Aurora, Colorado. Because of limited resources and aeronautical constraints, virtually all of our nation's fighter units train in airspace that is within a "tank of gas" of the aircrews' base.

Response to Comment No.13

The use of flight simulators for pilot training is already part of the training program for various aircraft using the affected airspace. The F-16 training regulation (AFI 11-F16) stipulates those activities that may be accomplished using simulators and those requiring actual flying. Although flight simulators work well for certain types of training (e.g., emergency procedures and instrument training), the complete substitution of simulator training for all flight training is not a viable alternative. In addition, the availability of simulators for on-going readiness training is limited and not currently at the 140 WG.

May 15, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

Re: Colorado Airspace Initiative - DEIS
Custer County, Colorado

I would like to go on record as strenuously objecting to the conclusion of the DEIS findings for Custer County, Colorado. Clearly people can find a way to justify any conclusion that they decide in advance they want to reach and it seems obvious that this is what happened in the case of the proposed MOA's and MTR's! There is no way that one can HONESTLY and in good conscience call this proposal a "win-win..." situation. The only winners are once again the all-powerful bureaucrats who do whatever they feel like doing without regard to what the citizens and taxpayers of this country want. 1

The ratiocination of this study is flawed to say the least. What logical process allows one to average decibels over a 24 hour period in order to determine an acceptable level? That would be akin to saying that what would normally be a lethal dose of poison in one application will only make you sick but not kill you if you take small doses over a period of time. The fact is, these decibels arrive in one "dose" and averaging them to justify your preconceived conclusion only serves to insult the intelligence of the taxpayers who funded this study. 2

So allow me to speak for the silent majority:
THE CITIZENS AND TAXPAYERS OF CUSTER COUNTY OVERWHELMINGLY OPPOSE THE AIRBURST MOA, LAVETA MOA AND ALL MTRS LEADING TO THE AIRBURST RANGE.

We purchased 160 acres in Custer County to enjoy the rural atmosphere, recreational opportunities of the wilderness area, and to take advantage of the agricultural potential. This is why everyone has come to the Wet Mountain Valley and it is unfair, iniquitous and downright immoral to ruin the God-given tranquility of this valley with the MOA. 3

I have personally seen the negative effect of human intrusion on the wildlife of this area. Just the rare sound of a vehicle miles down the road is enough to send wild turkey, bear and elk into a panicked flight for cover. The detrimental impact of sonic booms and low fly-bys would be absolutely horrendous! The MOA totally defeats the purpose of designating wilderness area!!! 4

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RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

The military has gotten along without this airspace for many years and I haven't read anything yet to convince me that this MOA is an absolute necessity! Please listen to the citizens and taxpayers of this country for a change -- if more airspace is really required, look for an area less dependent on ranching and an area with less wildlife that could be traumatized. Citizens seek out the Sangre De Cristo Wilderness Area for its tranquility and isolation from the intrusions of modern life. The MOA is at cross-purposes with the inhabitants (both human and animal) of Custer County. This proposal should be abandoned at once! 5 6 7

Sincerely,

Catherine Méthot
19775 Top O' The Moor
Monument, CO 80132

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RESPONSES TO COMMENTS

Response to Comment No.3

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Response to Comment No.4

The ANG adheres to its "Policy on Air National Guard Overflights of Designated Wilderness and Wild and Scenic Rivers," as presented in Appendix L. This policy is intended to protect specifically identified areas, such as the Sangre de Cristo and Greenhorn Mountain Wilderness Areas, by limiting training operations to no lower than 2,000 feet above ground level whenever possible unless safety of the flight or operational parameters (e.g., weather conditions) may be compromised.

Response to Comment No.5

The Colorado Airspace Initiative is not an expansion of airspace, but rather a modification. In many cases, this modification actually results in a reduction of airspace and/or number of sorties flown. The need for the Colorado Airspace Initiative is presented in Subsection 1.3 of the EIS.

Response to Comment No.6

The use of other training areas was examined as part of the development of the alternatives studied in detail in the EIS in Subsection 2.3. The proposal was designed to minimize conflicts with potentially sensitive areas while providing the training resources necessary to meet military readiness requirements. Specific narrowing criteria for the selection of military training airspace (see Subsection 2.3.3 in Volume I) were used to evaluate other locations, and no alternative training areas were identified that could be substituted for the airspace configuration proposed in the alternatives studied in the EIS.

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Response to Comment No.7

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Written Comment Form

ENVIRONMENTAL IMPACT STATEMENT FOR THE COLORADO AIRSPACE INITIATIVE

SHIPPED MAY 15 1996

If you would prefer to submit written comments on the DEIS, please use this form. Continue on the back of the form or attach extra sheets, as necessary. Thank you.

NAME: Don Newkirk

TITLE/ORGANIZATION: Owner of El Campo Motel

ADDRESS: 401 Ulysses (Street) Monte Vista, CO 81144 (City/State/Zip)

– COMMENTS –

I was ~~solicited~~ scheduled to speak in favor of the ANG" Plan to use the San Luis Valley as a Training Zone but after I witnessed the mentality of the Representatives of the opposition, I'm Glad I didn't, I would have probably made alot of enemies in Crestone, Moscs & Hooper.

As a Motel owner, I'm not the least bit concerned about the Affect these planes will have on our Tourism. So far No one making Reservations or seeking information about the Valley, has ask me whether or not We have a Military Training Zone in the area.

I've Lived in Two different areas that Conducted military training flights. I Grew up 7miles from Moore AFB in Mission Texas and I Lived in Kirkland Arizona where these flights went on every day. South Texas has more Livestock than All Colorado Combined and None of the Ranchers ever Complained about the Mental Affect these planes had on Livestock Arizona was the Same way. The Air Force not only flew F-16's through the passes around Kirkland And Yarnell but Also F-14's, F-15's and F-18's. The Navy Flew A-7's & A-6's through this area & None had any Affect on Livestock or Wildlife Every excuse And Reason given by the opposition was Selfish and As far as I'm Concerned, "Stupid" I hope to see these beautiful birds (F-16's) soon Flying through this San Luis Valley. Good Luck.

Yours Truly

Don Newkirk

Former AIC U.S. AF

Security Service

1965 – 1969

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Please hand this form to the staff, drop into the collection box, or mail to:

Program Manager, CAI EIS
Environmental Division
Air National Guard Readiness Center/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

RESPONSES TO COMMENTS

Response to Comment No. 1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Laura Norman
225 Summit Drive
Dillon, CO 80435
May 15, 1996

Program Manager, CAI EIS
Environmental Division
Environmental Planning and Air Space Branch
Air National Guard CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

Dear Program Manager,

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Thank you for your time,

Sincerely,

Laura Norman

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RESPONSES TO COMMENTS

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The ANG has been and will continue to work with the U.S. Fish and Wildlife Service, the Colorado Department of Natural Resources, the Bureau of Land Management, and other regulatory agencies to study the effects of their actions on threatened and endangered species within the areas affected by its operations. Representatives from these organizations meet periodically in a Coordination Group to discuss and study species of concern. Some ongoing study activities are currently funded by the ANG, including a study with the U.S. Forest Service on the Mexican Spotted Owl. The ANG will continue this cooperative effort and adjust its operations should any of these studies identify potential impacts on any threatened or endangered species.

Response to Comment No.5

Because of the potential for loss of a pilot's life and the high cost of modern military aircraft, avoidance of collisions with birds is extremely important to the ANG. The potential for a bird-aircraft strike would not change significantly under the proposal. Both the Original Proposal Alternative and the Preferred Alternative consist largely of modifications to existing airspace or establishments of new airspace in the vicinity of existing airspace. These actions would, therefore, encompass the same seasonally adjusted bird avoidance procedures associated with the bird migration corridors as are utilized currently with the existing airspace. Due to the fact that only four bird strikes have occurred in existing airspace associated with the Colorado Airspace Initiative in the past five years, the likelihood of future bird-aircraft strikes under any of the alternatives would be expected to be low.

The USAF has established a Bird/Aircraft Strike Hazard (BASH) Team to implement procedures to prevent and reduce the threat of bird/aircraft strikes, and to investigate and track any bird strikes that occur. In addition, each USAF/ANG base or flying unit is required to establish a BASH program to minimize the risk of bird strikes both at the base airfield and in airspace training routes for the unit. The USAF BASH Team assists each base or flying unit by providing Bird Avoidance Model (BAM) graphs. These graphs estimate the relative bird strike risk for flying along a specific low-level route or operations area. The model is developed on the basis of waterfowl and raptor migration and concentration data. The BAM graph depicts the severity of the bird strike hazard at a particular time of day, month, and segment of a low-level route. This information is used by the flying unit to determine the optimum route schedule and avoidance measures to be taken to prevent bird/aircraft strikes. In addition, the unit publishes Notices to Airmen (NOTAM) to alert transient aircrews to specific bird migration hazards, activity periods, and avoidance procedures.

RESPONSES TO COMMENTS

Response to Comment No.6

Studies conducted on wildlife have shown that numerous wildlife species have the ability to adapt to the presence of man and various man-made sound sources, including jet aircraft noise. While the noise generated from low-altitude military overflights may be initially startling, habituation to jet aircraft noise occurs with most wildlife species. Species-specific responses to low-altitude overflights vary considerably, and responses from individual animals may have the potential to cause injury. However, wildlife populations are usually affected only when a variety of factors work in combination to impact them, including declines or fluctuations in the availability of a food source, habitat destruction or alteration, predation, hunting, trapping, poaching, disease, or inclement weather, rather than noise alone. Normally, it would be unrealistic to predict or attribute any wildlife population declines to a single stressor, such as noise. In addition, no published scientific evidence was identified that indicated harm may occur to wildlife as a result of exposure to the levels of noise generated by military aircraft that would utilize the airspace associated with the Colorado Airspace Initiative.

Response to Comment No.7

The EIS evaluated aircraft air pollution resulting from each of the alternatives studied in the EIS using scientifically validated emissions modeling tools designed to predict ground-level pollutant concentrations. The total air pollution emissions from the 140 WG would be reduced under the Preferred Alternative and the Original Proposal as compared to existing conditions, because the total number of flying hours would be reduced from 5005 to 4600 hours. The cumulative air pollution concentrations, as determined through computer modeling for each of the airspace segments, could increase or decrease depending upon a variety of factors. These factors include the type of aircraft using the airspace, their altitude, frequency, power setting and meteorological conditions rather than a strict proportional relationship to the number of sorties flown. Nonetheless, under the worst case scenario modeled for each airspace segment under each of the alternatives, no air pollution concentrations resulting from aircraft operations would cause any local area to be out of compliance with Federal or state standards or make any significant impact on air quality in any area. Also, when comparing these air pollution concentrations with Federal and state limits for the Prevention of Significant Deterioration (PSD) in air quality, all levels were far below minimums.

Response to Comment No.8

In order to address concerns regarding possible devaluation of real estate, the EIS evaluated historical data for property values. This analysis compares counties within the study area for the CAI, including those areas with currently utilized military airspace, to counties outside the study area. The results indicate that all counties experienced increases in property values. Further, in terms of median property values, counties within the study area for the CAI increased 99.71 percent compared to counties outside the study area, which increased 57.74 percent. Whereas a report published by the Federal Aviation Administration concludes "that noise has been shown to decrease the value of property by only a small amount--approximately 1 percent decrease per decibel (DNL)," this analysis applies to airport/airfield environments and not land areas underlying military training airspace. Therefore, although it is not possible to absolutely conclude that counties experiencing military aircraft overflights incur any greater change in real estate values than counties not experiencing similar overflight activity, it is not likely that real estate values would drop as a result of the CAI.

Response to Comment No.9

Data regarding property values for Huerfano and Custer Counties were presented previously in Subsections 4.9.4 and 4.9.8 of the EIS.

Response to Comment No.10

Since 1970, many Colorado counties, including Custer County, have experienced an increase in total population, the number of housing units, property values, and the general local economy. Because many factors contribute to socioeconomic conditions and no absolute link between aircraft overflights and economic changes can be determined, it is not possible to conclude that an increase (or decrease) in building activity is directly attributable to a change in the number of sorties flown. Custer County appears to have experienced growth during periods of high and low aircraft activity levels. A review of socioeconomic conditions across the entire CAI study area does not reveal widespread, repetitive, or consistent patterns. For example, while some counties may have experienced an increase in population, housing, and employment, other counties may have experienced a decrease in these conditions. Additionally, some counties may have experienced a combination of growth in population and housing but a decline in local economic conditions.

Response to Comment No.11

Low-altitude flights allow pilots to learn to avoid detection and to survive in combat. Low-altitude flying provides a significant operational procedure through which detection can be minimized. Training is essential to acquire the skill to use this procedure. Specific combat conditions that allowed high-altitude operations in the Gulf War may not exist in future conflicts. The need for this training is required by Air Force training regulations.

Response to Comment No.12

The use of other training areas was examined as part of the development of the alternatives studied in detail in the EIS in Subsection 2.3. The proposal was designed to minimize conflicts with potentially sensitive areas while providing the training resources necessary to meet military readiness requirements. Specific narrowing criteria for the selection of military training airspace (see Subsection 2.3.3 in Volume I) were used to evaluate other locations, and no alternative training areas were identified that could be substituted for the airspace configuration proposed in the alternatives studied in the EIS.

The primary user of the airspace included in the Colorado Airspace Initiative is the 140 WG based at Buckley Air National Guard Base in Aurora, Colorado. Because of limited resources and aeronautical constraints, virtually all of our nation's fighter units train in airspace that is within a "tank of gas" of the aircrews' base.

Response to Comment No.13

The use of flight simulators for pilot training is already part of the training program for various aircraft using the affected airspace. The F-16 training regulation (AFI 11-F16) stipulates those activities that may be accomplished using simulators and those requiring actual flying. Although flight simulators work well for certain types of training (e.g., emergency procedures and instrument training), the complete substitution of simulator training for all flight training is not a viable alternative. In addition, the availability of simulators for on-going readiness training is limited and not currently at the 140 WG.

May 15, 1996

ANG Rediness Center
Andrews AFB, MD 20762

RE: La Veta MOA
La Veta Area, Colorado

Dear Sirs:

I am writing in concern for the lowering of the altitude AGL that is proposed for our area.

I do not see the need for this small area to be designated a low level area for flights/training etc. There are far better areas for these training missions. Perhaps the Pinon Area. 1

I am a private pilot, flying small aircraft in this area, there have been times that I am very nervous to fly in my own back yard. Please understand that I am a registered voter, living in this area most of my adult life. Our resources are very limited, not all renewable. I trust that you will make the best possible decision regarding my future, my childrens futures, and the future of all living creatures in our area. 2

Low level flight and manouvers can not benefit our natural resources; please consider re-locating to the Pinon Area. The voters in our area know that you will do the right thing, please move this MOA to a more remote area like Pinon.

Your understanding is appreciated,

Singerely,

Carolyn Seran
La Veta - Colorado

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RESPONSES TO COMMENTS

Response to Comment No.1

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Response to Comment No.2

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

LEONARD E. BERK, M.D.
Orthopaedic Surgery

Harvard Park Medical Plaza West
850 E. Harvard Ave., Suite 125
Denver, CO 80210
(303) 722-0221
FAX (303) 722-0148

May 15, 1996

Program Manager, CAIEIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

To Whom It May Concern:

We own a mountain home in the San Isabel Lake area, not far from Westcliff. Westcliff is one of our favorite spots. The attraction in this area is the quiet peacefullness of the whole valley.

We go to our mountain home for rest and relaxation and to enjoy nature's serenity.

To even think that this would be interrupted with noisey jets is beyond belief.

WHAT ARE YOU THINKING???

I strongly object to the Colorado airspace inititive..We insist on the elemination of Airburst MOS, La Veta MOA and all MtRs leading to the Airburst Range.

Don't ruin one of the last pristeen places in our country.

Sincerely Yours,

Barbara J. Thompson

Barbara J. Thompson, receptionist for
Leonard E. BErk, M.D.

CC: Custer County Action Association
CC: Governor Roy Romer
CC: Senator Hank Brown
CC: Congressman Scott McInnis
CC: Senator Ben Nighthorse Campbell

Joseph L and Barbara Thompson
6666 S. Pennsylvania Street
Littleton, Co. 80121

303-798-4241

283

RESPONSES TO COMMENTS

Response to Comment No.1

There would be some changes in sortie numbers, noise levels, and airspace dimensions under the Original Proposal and the Preferred Alternative addressed in the EIS. However, overall flying hours of the 140 WG will be reduced from 5005 hours to 4600 hours. When compared to existing military aircraft training in the study area, these changes would not change the current levels of solitude and peace and quiet experienced by residents. As under current conditions, noise from military aircraft operations may periodically disturb citizens and affect their enjoyment of solitude; however, opportunities for abundant periods of total peace and quiet would continue as under present conditions.

Response to Comment No.2

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

Response to Comment No.3

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

May 15, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Av.
Andrews AFB, Md 20762-5157

Re: Colo Airspace Initiative

TO WHOM IT MAY CONCERN:

We are writing to express our objection to the Air National Guard Military Operations (MOAs) and the Military Training Routes (MTRs) over the Wet Mountain Valley. We realize and appreciate their training must be done but feel there are better places than over an area where it was just made a "wilderness area" and where there are an abundance for wildlife that breed and stay in the area throughout the year. This area has really developed in the past few years and people have come to this area to retire. (Not to hear planes zooming at low altitudes day and night). What is wrong with training over the desert areas in places like Arizona and Nevada? 1 2

A couple of years ago a group of low flying helicopters flew over this area and I know what a tremendous amount of noise they made so I hate to think of having to listen to this day and night so PLEASE RE-CONSIDER AND PICK ANOTHER AREA FOR YOUR TRAINING. 3

Sincerely,
Charlie Tomsick Dorothy Tomsick
Charles and Dorothy Tomsick
11078 Hwy 96
Westcliffe, Co. 81252

cc/ Governor Roy Romer
Senator Hank Brown
Senator Ben Nighthorse Campbell
Congressman Scott McInnis

284

RESPONSES TO COMMENTS

Response to Comment No.1

The ANG adheres to its "Policy on Air National Guard Overflights of Designated Wilderness and Wild and Scenic Rivers," as presented in Appendix L. This policy is intended to protect specifically identified areas, such as the Sangre de Cristo and Greenhorn Mountain Wilderness Areas, by limiting training operations to no lower than 2,000 feet above ground level whenever possible unless safety of the flight or operational parameters (e.g., weather conditions) may be compromised.

Response to Comment No.2

The use of other training areas was examined as part of the development of the alternatives studied in detail in the EIS in Subsection 2.3. The proposal was designed to minimize conflicts with potentially sensitive areas while providing the training resources necessary to meet military readiness requirements. Specific narrowing criteria for the selection of military training airspace (see Subsection 2.3.3 in Volume I) were used to evaluate other locations, and no alternative training areas were identified that could be substituted for the airspace configuration proposed in the alternatives studied in the EIS.

The primary user of the airspace included in the Colorado Airspace Initiative is the 140 WG based at Buckley Air National Guard Base in Aurora, Colorado. Because of limited resources and aeronautical constraints, virtually all of our nation's fighter units train in airspace that is within a "tank of gas" of the aircrews' base.

Response to Comment No.3

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

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Received 5/20/96

Leon C. Tupy
Vice President

Private Client Group

Exeter Building
1050 Walnut Street, Ste. 101
P.O. Box 7120
Boulder, Colorado 80306-7120
303 938 3939
800 937 0902
FAX 303 938 3999

Merrill Lynch

5-15-96

Dear Custer Co Assoc,

I am writing to express my
strong feelings relating to the proposed
MOA by the Air Natl Guard.
I feel it would be Terribly bad
for the environment + Life style of the area
+ urge you to go back again to make
your case with the Gov, F Pres + Congressmen
from Colo. To even think about allowing
fly over by pilots stationed in other states
is a dereliction of duty by our elected officials

Sincerely
Lisa Tupy

1

2

3

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

Many citizens have expressed concern that their quality of life, which is based directly on the kind of lifestyle that they can enjoy while residing in or visiting the State of Colorado, will be changed by implementation of the CAI. The U.S. Air Force, including the ANG, has been conducting military aircraft operations in the Wet Mountain Valley and the San Luis Valley areas where people are most concerned for approximately 25 years. Most of the military airspace proposed under any of the alternatives is currently in use. Commercial aircraft overflights have also been taking place and will continue to do so. Citizens may notice changes in military aircraft overflights in certain areas associated with the CAI. The number of sorties are proposed to increase moderately in portions of the study area and decrease in others. Overall sorties will be reduced from 5,441 to 4,909 under the Preferred Alternative. The bottom altitudes of several airspaces where citizens are most concerned have been raised to reduce noise levels. Therefore, existing quality of life should not be changed.

Response to Comment No.3

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Andy Wiessner
811 Potato Patch Drive
Vail, CO 81657

May 15, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Ave
Andrews Air Force Base, MD 207-62-5157

Dear Sir/Madam,

This is to voice my strong opposition to any increased low level Colorado National Guard overflights in the San Luis and Wet Mountain Valley areas.

I am very familiar with both areas in question and with their outstanding solitude, wildlife values and wilderness attributes. Frankly, I thought that the issue of increased overflights had been laid to rest several years ago...but I guess not. 1,2

In any event, these areas are not the types of places where the environment should be disturbed by low level flights which dramatically raise noise levels. I realize that the Air National Guard needs places to train at low levels, but it seems that it is far more appropriate to do so on Colorado's eastern plains than in the mountain valleys where the noise can reverberate in very undesirable ways and disturb both residents and wildlife. 3

Sincerely,

Andy Wiessner

P.S. To save costs to you, please do not put me on your mailing list for any future EIS material, etc.

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RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Response to Comment No.3

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The primary user of the airspace included in the Colorado Airspace Initiative is the 140 WG based at Buckley Air National Guard Base in Aurora, Colorado. Because of limited resources and aeronautical constraints, virtually all of our nation's fighter units train in airspace that is within a "tank of gas" of the aircrews' base.

Allan & Dominique Burns
441 Bear Peak Road
P O Box 97
Silvercliffe, CO 81252

May 16, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD. 20762-5157

Dear Sirs:

I am writing to voice my objection to the proposed fly overs in the general Westcliffe, Co. area.

The logic used to determine noise over a 24 hour period is really unfair, does a local policeman prorate a cars loud mufflers based on the sound for a 24 hour period? or does a wild party with excessive noise get excused because the noise only lasted 4 hours of a 24 hour day? The day-night averaging is a unfair play on numbers by a branch of our government, and an unfair basis of comparison of noise pollution in our peaceful area. -1

The plan to use the general Westcliffe, CO area is a gross invasion of rights on all of the people of this area, As I understand it, this is low level practice for our military to be able to duplicate in time of war. Why not use actual cities if as you say there will be minimal noise and sight pollution from these aircraft? To try and use a sparsely populated area and justify it by saying there are only a few complaints is like saying we, the area residents really don't count for anything. -2

Please consider all of the facts, and decide to locate this type flying over wilderness areas (you state no harm at all to animals) or use simulations in the vast test areas already blocked out for the military.

Sincerely,

Allan Burns

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RESPONSES TO COMMENTS

Response to Comment No.1

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

Response to Comment No.2

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Mary Currier & Chas S. Clifton
P.O. Box 295 • Florence, Colorado 81226 • (719) 784-3160

Wetmore, Colorado
May 16, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, Maryland 20762-5157

The Draft Environmental Impact Statement for the Colorado Airspace Initiative leaves out more than it includes. In addition, we believe that portions of it are based on faulty assumptions and poor scientific methodology. 1

As other critics have noticed, the study's model for noise impact from low-level military aircraft is (a) based on urban airport models and (b) averages out sudden effects on people and animals, both domestic and wild, over a 24-hour period. The end result is to camouflage the significant degradation of the aural environment caused by these flights, as well as potential harm to livestock and wildlife. 2, 3

In considering the effect of flights in the Airburst A sector of Fremont County, which is roughly contiguous with the Beaver Creek Wilderness Study Area, the EIS's authors ignore the fact that the Department of the Interior is required to manage this land as *de facto* wilderness pending Congressional action. Therefore, the Colorado Air National Guard should not hide behind the technicality that the area has not been so designated. Instead, as an example of governmental cooperation, the CANG should raise the "floor" of Airburst A to 2,000 feet above ground level, the same as above the Sangre de Cristo Wilderness and others. 4, 5

The Draft EIS fails also to adequately discuss use of these air corridors by military aircraft from outside units. Residents of eastern Fremont and Custer counties are already subject to loud, tree-skimming flights by C-130 aircraft from Peterson AFB, for example. Pilots frequently fly below ridge lines and down valleys, which serves to amplify the noise created. Yet these flights, their frequency, duration, and possible restrictions are totally ignored in the Draft EIS. 6

Tellingly, the authors suggest but fail to elaborate on the possibility of additional low-level flights over the affected area by fighter, bomber, and transport aircraft. It is easy to see that the 140th Fighter Wing is being used as a "stalking horse" for increased low-level military activity in our skies.

Instead of dodging these and other questions, the Colorado Air National Guard and the Air Force should reconsider whether combat aircraft should co-exist at close quarters with a major civilian hub airport such as Denver International. The long-term solution may be to relocate the 140th Wing. 7

Sincerely,

Mary Currier
Mary Currier

Chas S. Clifton
Chas S. Clifton

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RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

The approach used in the EIS has been modified. The Federal Interagency Committee on Noise (FICON), representing a variety of Federal agencies with a mix of concerns associated with aircraft noise, reviewed aircraft noise analyses issues in 1992. This committee's report (FICON 1992) continued an approach to evaluating relative impacts associated with aircraft noise that has been recognized by noise analysis experts as the most widely endorsed and comprehensive approach to aircraft noise analysis available. This approach to noise analysis was incorporated into the analyses associated with the Draft EIS. In general, Federal land use compatibility criteria are derivatives of guidelines first devised for land near airports. All land use compatibility is based on the use of Day-Night Average Sound Level (abbreviated as DNL or Ldn) as the descriptor representing community noise environments. The criteria treat areas below DNL 65 dB as compatible for all uses, including residential, and they treat DNL 65 dB as a threshold for significant exposure. There is no generally accepted method for treating rural areas differently for these purposes.

However, many EIS reviewers, including some members of the Federal regulatory community, felt the application of the FICON standards, and the 65 dB threshold, to a rural setting was inappropriate for such areas with more quiet ambient noise conditions. Consequently, the use of the 65 dB threshold as the sole means to assess relative impacts or the acceptability of noise levels associated with aircraft operations addressed in the EIS has been modified and the analysis now includes additional information to evaluate potential impacts.

copies: Custer County Action Association
Governor Roy Romer
Colorado congressional delegation
Fremont/Custer legislative delegation

RESPONSES TO COMMENTS

Response to Comment No.3

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

Response to Comment No.4

The ANG adheres to its "Policy on Air National Guard Overflights of Designated Wilderness and Wild and Scenic Rivers," as presented in Appendix L. This policy is intended to protect specifically identified areas, such as the Sangre de Cristo and Greenhorn Mountain Wilderness Areas, by limiting training operations to no lower than 2,000 feet above ground level whenever possible unless safety of the flight or operational parameters (e.g., weather conditions) may be compromised.

Response to Comment No.5

The ANG makes every effort to protect designated wilderness areas from aircraft noise. Non-designated areas and general lands under the jurisdiction of the Bureau of Land Management that may be viewed as pristine areas to many citizens carry no special protections from man-made noise sources. Should specific sensitive areas or noise receptors be identified, procedures may be implemented to provide avoidance of aircraft overflights of these areas.

Response to Comment No.6

The aircraft referred to (C-130) are not required to schedule or use military special use airspace or military routes. To perform their missions, they may fly in the same manner as general aviation aircraft (e.g., Cessna, Beechcraft, etc.) since they are at a speed below 250 knots. As such, they may traverse anywhere within a flying radius of approximately 400 miles from the departure base.

The ANG is currently working with Peterson Air Force Base and other C-130 flying units to ensure their knowledge of noise sensitive areas in Colorado.

Response to Comment No.7

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

May 16, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

Dear Sir:

I wish to register my personal protest to the Draft Environmental Impact Statement. 1

Not only is the number of flights totally ridiculous but the Day-Night Averaging used in the noise analysis is almost laughable. 2

Sincerely,

Jack L. Dickerson
P. O. Box 216
Silver Cliff CO 81249

c.c.

Governor Roy Romer

Senator Hank Brown

Senator Ben Nighthorse Campbell

Congressman Scott McInnis

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RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

Received 5/24/96

May. 16, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

Dear Program Manager,

I am writing in regard to the Colorado Airspace Initiative to eliminate the Airburst Military Operation Area (MOA), LaVeta Military Operation Area(MOA), and all Military Training Routes (MTR) leading to the Airburst Range in and around the Custer County area in Colorado. Although the Air National Guard has completed an Environmental Impact Statement, stating that new MOAs and MTRs would not affect the environment, wildlife and economy, I have strong objections to their findings. 1

To begin with, the noise decibels in this area are extremely low, unfortunately this is not taken into consideration in the statement by the Air National Guard. The fact that an aircraft, that reaches decibel levels of 110-130, flying overhead in this particular area would have serious effects. 2

The fact this area is so quiet and calm is what attracted myself and many others to buy property in Custer County. Of all the places I looked at in Colorado to buy property, I chose this area not just for the abundant wildlife, the majestic mountains and clean air, but for the quietness it holds. This is what Colorado has a reputation for and is what brings tourists and potential residents to this area. But now with 110-130 decibel aircrafts flying low, why in the world would any tourist come here to vacation, when they could sit by an airport at home and listen to the intensity of the same thing. 3

Not only would tourism vanish, but there would also be a tremendous effect on property value in this area. I have been considering taking up permanent residence and joining the work force in Custer County. If the Colorado Airspace Initiative wins, there is no question that I would not live there and I would not be the only one. Isn't it clear that making this area a training field would directly hurt the property value tremendously and make the economy suffer? 4

Again I insist in the elimination of the Airburst MOA, LaVets MOA and all MTRs in this proposed area. I ask you, why would anyone want to tamper with an area so beautiful,rich with wildlife and most importantly quiet? 5

Sincerely,

Julie M. Gatton

Julie M. Gatton
Colorado Springs, CO

293

RESPONSES TO COMMENTS

Response to Comment No.1

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

Response to Comment No.2

There would be some changes in sortie numbers, noise levels, and airspace dimensions under the Original Proposal and the Preferred Alternative addressed in the EIS. However, overall flying hours of the 140 WG will be reduced from 5005 hours to 4600 hours. When compared to existing military aircraft training in the study area, these changes would not change the current levels of solitude and peace and quiet experienced by residents. As under current conditions, noise from military aircraft operations may periodically disturb citizens and affect their enjoyment of solitude; however, opportunities for abundant periods of total peace and quiet would continue as under present conditions.

Response to Comment No.3

The role of tourism in the local economy, and its impact from the alternatives associated with the CAI, have been studied in the EIS as a part of the evaluation of socioeconomic impacts. There are a number of factors, other than aircraft operations, that may affect tourism and the use of recreational areas, including weather, the proximity of other attractions in the area, and the economy. While it is possible that a tourist visiting an area may find an aircraft overflight to be annoying, no significant change to the tourist industry would be expected considering the fact that the majority of the CAI airspace has existed for many years and the relevant influences from military aircraft operations are not changing in the study area. The contribution of tourism earnings to total industry earnings was presented in the EIS for each airspace. In all instances, these values were very consistent with overall state levels of tourism earnings as compared to industry earnings.

RESPONSES TO COMMENTS

Response to Comment No.4

In order to address concerns regarding possible devaluation of real estate, the EIS evaluated historical data for property values. This analysis compares counties within the study area for the CAI, including those areas with currently utilized military airspace, to counties outside the study area. The results indicate that all counties experienced increases in property values. Further, in terms of median property values, counties within the study area for the CAI increased 99.71 percent compared to counties outside the study area, which increased 57.74 percent. Whereas a report published by the Federal Aviation Administration concludes "that noise has been shown to decrease the value of property by only a small amount--approximately 1 percent decrease per decibel (DNL)," this analysis applies to airport/airfield environments and not land areas underlying military training airspace. Therefore, although it is not possible to absolutely conclude that counties experiencing military aircraft overflights incur any greater change in real estate values than counties not experiencing similar overflight activity, it is not likely that real estate values would drop as a result of the CAI.

Response to Comment No.5

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

May 16, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

Dear Program Manager,

I am writing in regard to the Colorado Airspace Initiative to ELIMINATE the Airburst Military Operation Area (MOA), LaVeta Military Operation Area (MOA) and all Military Training Routes (MTR) leading to the Airburst Range, in and around the Custer County area in Colorado. 1

The Wet Mountain valley is one of the more beautiful, serene places in our state. It is a fragile economy based on ranching, tourism and outdoor recreation. Westcliffe is a quiet community with strong values. It would be devastating to the entire valley to have sonic booms constantly bombarding this place. Ranchers and homeowners would suffer from nose-diving property values. Businesses and resorts would suffer from less tourism. Recreation areas would suffer from decreased campers, hunters and fishermen. The effect on wildlife would be equally devastating. Wildlife is stressed very easily which may force big game animals to leave the area to raise their young. Families are not going to want to spend their time hunting, fishing and camping in a place with loud, low-flying jets. Approval of this MOA will have a negative effect on everyone and everything in this area. 2, 3, 4

The noise analysis method used to measure the potential impact is extremely ridiculous! The average noise level in this community is 30 decibels. That's equivalent to a whisper! The decibel level of these military jets are 110 or more. It is ludicrous to say these average out to an acceptable level. The pain threshold level for the human ear is 108 decibels. To say this would have no negative impact on this area, is to insult the intelligence of all people in and around Custer County. This system of averaging decibel levels over a 24 hour period may work in urban areas, where levels are constantly higher, but won't work in rural areas. You cannot light a firecracker behind someone in a silent room and light one behind someone at a loud New Year's Eve party and expect the same results. That is what this DEIS report is attempting to do. 5,6

My job in Colorado Springs, brings me in contact with a large variety of people. Most of whom express outrage upon hearing what might happen to their favorite hunting and fishing areas. We, like our ancestors have used this land as a sanctuary, a place to go when everyday pressures of life become too great. We must ELIMINATE the Airburst MOA, LaVeta MOA and all MTRs leading to the Airburst Range in and around Custer County, Colorado for now and Generations to come. 7

Sincerely,

Timothy P. Gatton

Timothy P. Gatton
Colorado Springs, CO

RESPONSES TO COMMENTS

Response to Comment No.1

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

Response to Comment No.2

Sortie numbers are an excellent means to determine potential overflights. MTRs are one-way traffic routes so an aircraft can pass over a single location only one time on one sortie. MOAs do allow an opportunity for multi-directional traffic; however, training objectives to vary the pilot's experiences during the sortie and fuel limitations of the aircraft would make repeat identical passes over one ground location an undesirable and unlikely training scenario.

Response to Comment No.3

Studies conducted on wildlife have shown that numerous wildlife species have the ability to adapt to the presence of man and various man-made sound sources, including jet aircraft noise. While the noise generated from low-altitude military overflights may be initially startling, habituation to jet aircraft noise occurs with most wildlife species. Species-specific responses to low-altitude overflights vary considerably, and responses from individual animals may have the potential to cause injury. However, wildlife populations are usually affected only when a variety of factors work in combination to impact them, including declines or fluctuations in the availability of a food source, habitat destruction or alteration, predation, hunting, trapping, poaching, disease, or inclement weather, rather than noise alone. Normally, it would be unrealistic to predict or attribute any wildlife population declines to a single stressor, such as noise. In addition, no published scientific evidence was identified that indicated harm may occur to wildlife as a result of exposure to the levels of noise generated by military aircraft that would utilize the airspace associated with the Colorado Airspace Initiative.

Response to Comment No.4

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.5

The approach used in the EIS has been modified. The Federal Interagency Committee on Noise (FICON), representing a variety of Federal agencies with a mix of concerns associated with aircraft noise, reviewed aircraft noise analyses issues in 1992. This committee's report (FICON 1992) continued an approach to evaluating relative impacts associated with aircraft noise that has been recognized by noise analysis experts as the most widely endorsed and comprehensive approach to aircraft noise analysis available. This approach to noise analysis was incorporated into the analyses associated with the Draft EIS. In general, Federal land use compatibility criteria are derivatives of guidelines first devised for land near airports. All land use compatibility is based on the use of Day-Night Average Sound Level (abbreviated as DNL or Ldn) as the descriptor representing community noise environments. The criteria treat areas below DNL 65 dB as compatible for all uses, including residential, and they treat DNL 65 dB as a threshold for significant exposure. There is no generally accepted method for treating rural areas differently for these purposes.

However, many EIS reviewers, including some members of the Federal regulatory community, felt the application of the FICON standards, and the 65 dB threshold, to a rural setting was inappropriate for such areas with more quiet ambient noise conditions. Consequently, the use of the 65 dB threshold as the sole means to assess relative impacts or the acceptability of noise levels associated with aircraft operations addressed in the EIS has been modified and the analysis now includes additional information to evaluate potential impacts.

Response to Comment No.6

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

Response to Comment No.7

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Suzanne B. Jack

4904 Macy Lane
Westcliffe, CO 81252

(719) 783-2935
FAX 783-2154

May 16, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

RE: Colorado Airspace Initiative

LET'S TAKE THE BROAD VIEW...

THE WET MOUNTAIN VALLEY, CUSTER COUNTY, COLORADO IS ARGUABLY ONE OF THE THREE MOST BEAUTIFUL VALLEYS IN THE CONTINENTAL UNITED STATES,

AS SUCH...

THE WET MOUNTAIN VALLEY IS A NATIONAL TREASURE!

CONCLUSION...

WHILE THE UNITED STATES MAY NEED MOAS AND MTRS, THEY DO NOT BELONG IN A NATIONAL TREASURE!

LET US JOIN TOGETHER TO SAVE OUR NATIONAL RESOURCES

FOR ALL AMERICANS

AND NOT FOOLISHLY DAMAGE WHAT CANNOT BE REPLACED.

1

Sincerely,

Suzanne B. Jack

Suzanne B. Jack

cc: Governor Roy Romer
Senator Hank Brown
Congressman Scott McInnis
Senator Ben Nighthorse Campbell
Custer County Action Association

0298

RESPONSES TO COMMENTS

Response to Comment No. 1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

The earth and myself are of onemind. The measure of the land and the measure of our bodies are the same....

Chief joseph

Program Manager, CAI EIS SHIPPED MAY 16 1996
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

299

PLEASE BE ADVISED THAT THIS LETTER is to SERVE NOTICE THAT WE ARE OPPOSED TO THE COLORADO AIRSPACE INTIATIVE. 1

THIS is ALSO A FORMAL REQUEST TO ASK: WHERE IN THE ENVIRONMENTAL IMPACT STATEMENT DO YOU GUARANTEE THAT THERE BE NO NEGATIVE EFFECT ON MY PSYCHIC CONDITION BECAUSE OF YOUR MTRs. 2

Robert E. Muniz

REM/ll

7 ROBERTSON RD.
PUEBLO, COLO. 81001

CUERNO VERDE
PROPERTY OWNER

COPY TO
Roger
BROWN
McINNIS
NIGHTHORSE/CAMPBELL
CLINTON

RESPONSES TO COMMENTS

Response to Comment No. 1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No. 2

An additional discussion of human health effects has been added to Volume I of the EIS and can be found in new Subsection 4.13. This new subsection provides more information than previously given in the Draft EIS in Appendix G of Volume II.

May 16, 1996

ATTN: Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

I am writing this letter to protest the proposed Colorado Airspace Initiative and in response to the Draft EIS released this month regarding the same. First, I would like to share a short story.

My father, William M. Pence, was a soldier. Fatherless at age 5, he left home at 16, joined the Marines and, when his term was up, enlisted in the Army. He was a medic in the Infantry. He served on the front lines during World War II and during the Korean War. Much of his life following the war years was spent in "good service" and vain attempt to regain his spirit, a spirit lost as he watched life ebb from young men in his care. My father medicated his pain, as so many of his generation, with the bottle. As a family, we moved from base to base during his twenty some odd years of service and we lived the trials of his alcoholism. My father died in 1983 when he was 58, broken hearted over the path his life had taken. All of his military commendations were meaningless.

We had spent a few years preceding his death talking about the wars and the lost years. I was at my father's bedside while he was dying, putting his bilateral hearing aids in. He had only 30% of his hearing left in one ear and was considered deaf in the other. Shelling, mortar attacks, and the noise of war had damaged his ears so badly that progressive hearing loss, hearing aids, and increasing social isolation were also part of his life, our life...End of short story.

I came to the Wet Mountain Valley in 1994 with my husband. I first moved to Colorado in 1975 and have lived in Salida and Denver as well. The Wet Mountain Valley is now our home - this lifestyle, our choice. We are property owners who consider ourselves stewards of the land, its fragile botanic riches, its wildlife, and its ambience. We have protected, as best we can in our wills, the 93 acres and two homes we own here.

We are intelligent, well-educated, sensitive people and we find the conclusions of the Draft EIS inaccurate, e.g., averaging decibel levels over a 24-hour period to determine acceptability. My husband has a Master's degree in architecture. I am a registered nurse who went on to further my education in a deaf education/ communication disorders curriculum at Montana State University. I know the human ear does not average decibel levels. In addition, to use 65db (FICON's cutoff point for annoyance next to a commercial airport) as the yardstick for averaging is outrageous. A jet flying over at 110db will sound like 110db and the little fibers normally swimming in our inner ears will lay down in response.

300

1

2,3

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

The approach used in the EIS has been modified. The Federal Interagency Committee on Noise (FICON), representing a variety of Federal agencies with a mix of concerns associated with aircraft noise, reviewed aircraft noise analyses issues in 1992. This committee's report (FICON 1992) continued an approach to evaluating relative impacts associated with aircraft noise that has been recognized by noise analysis experts as the most widely endorsed and comprehensive approach to aircraft noise analysis available. This approach to noise analysis was incorporated into the analyses associated with the Draft EIS. In general, Federal land use compatibility criteria are derivatives of guidelines first devised for land near airports. All land use compatibility is based on the use of Day-Night Average Sound Level (abbreviated as DNL or Ldn) as the descriptor representing community noise environments. The criteria treat areas below DNL 65 dB as compatible for all uses, including residential, and they treat DNL 65 dB as a threshold for significant exposure. There is no generally accepted method for treating rural areas differently for these purposes.

However, many EIS reviewers, including some members of the Federal regulatory community, felt the application of the FICON standards, and the 65 dB threshold, to a rural setting was inappropriate for such areas with more quiet ambient noise conditions. Consequently, the use of the 65 dB threshold as the sole means to assess relative impacts or the acceptability of noise levels associated with aircraft operations addressed in the EIS has been modified and the analysis now includes additional information to evaluate potential impacts.

RESPONSES TO COMMENTS

Response to Comment No.3

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

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Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

In addition, the negative impact of noise pollution and constant distraction on the human psyche has been well publicized in recent years...anxiety, short tempers, depression, feelings of futility, etc., so who these days does not understand this? One need merely study the effects of loud inner city neighborhood environments on the psyches of its inhabitants, especially children. Regarding wildlife...in 1989, I was present at meetings in Denver where biologists and other experts testified that there IS significant negative impact on wildlife parturition and migration from sudden and sustained loud noise. This was in reference to the proposed Sheep Mountain Quarry in the Clear Creek Canyon area and part of the EIS process there. 4,5

My husband and I insist on the elimination of the Airburst MOA, La Veta MOA, and all MTRs leading to the Airburst Range as outlined in the Colorado Airspace Initiative. To think that there will be no significant environmental impact is, in my opinion, quite narcissistic on the part of the Air National Guard. Of course there will be impact. Significant negative environmental and economic impact in this quiet, relatively protected area. Along with noise pollution, the very real fire danger from acceptable loss plane crashes is unthinkable. Property values WILL dive and those of us who live here will be forced to stay or take losses. And, adaptability is not a valid argument although oft used. (Children adapt to abusive environments-does that make it right?) 6 7

The erroneous notion of some people that our valley is lightly populated therefore ideal defies logic. We are abundantly alive here. In the Wet Mountain Valley, alive equals quiet. This is a rare place in our country. We want to protect our quality of life here, not destroy it. 8

I challenge you to find a better means of training people for conflict resolution and a more foresighted way of dealing with military operations and the support operations of war. We live in a time where so much information is available and so many people are willing to try more peaceful lifestyles. This is good news. This is what much of the Wet Mountain Valley is about.

On behalf of my father whose spirit lives on in me, on behalf of my husband, and on behalf of the wildlife that inhabits our property and the land around us, please do not let this initiative come to pass. This is our airspace too. 9

Sincerely,

Susan L. Pence Antony S. Bevis

Susan Lynn Pence and Antony Sawyer Bevis

P.O. Box 246
Westcliffe, CO 81252

RESPONSES TO COMMENTS

Response to Comment No.4

Studies conducted on wildlife have shown that numerous wildlife species have the ability to adapt to the presence of man and various man-made sound sources, including jet aircraft noise. While the noise generated from low-altitude military overflights may be initially startling, habituation to jet aircraft noise occurs with most wildlife species. Species-specific responses to low-altitude overflights vary considerably, and responses from individual animals may have the potential to cause injury. However, wildlife populations are usually affected only when a variety of factors work in combination to impact them, including declines or fluctuations in the availability of a food source, habitat destruction or alteration, predation, hunting, trapping, poaching, disease, or inclement weather, rather than noise alone. Normally, it would be unrealistic to predict or attribute any wildlife population declines to a single stressor, such as noise. In addition, no published scientific evidence was identified that indicated harm may occur to wildlife as a result of exposure to the levels of noise generated by military aircraft that would utilize the airspace associated with the Colorado Airspace Initiative.

Response to Comment No.5

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.6

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

Response to Comment No.7

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.8

Many citizens have expressed concern that their quality of life, which is based directly on the kind of lifestyle that they can enjoy while residing in or visiting the State of Colorado, will be changed by implementation of the CAI. The U.S. Air Force, including the ANG, has been conducting military aircraft operations in the Wet Mountain Valley and the San Luis Valley areas where people are most concerned for approximately 25 years. Most of the military airspace proposed under any of the alternatives is currently in use. Commercial aircraft overflights have also been taking place and will continue to do so. Citizens may notice changes in military aircraft overflights in certain areas associated with the CAI. The number of sorties are proposed to increase moderately in portions of the study area and decrease in others. Overall sorties will be reduced from 5,441 to 4,909 under the Preferred Alternative. The bottom altitudes of several airspaces where citizens are most concerned have been raised to reduce noise levels. Therefore, existing quality of life should not be changed.

Response to Comment No.9

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Jimmie D Porter, Jr
31 Verdosa Drive
Pueblo, CO 81005
719-561-4116

May 16, 1996

Program Manager, CAIEIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

Dear Manager,

I am a property owner in Custer County, Colorado. I am writing in support of MOA and MTR military activities in Colorado. I feel that the military needs space to train in, so that they can be ready for active duty. The air space required is vast and see no harm is this type of training.

I have reviewed the letter written by the Custer County Action Association. The CCAA only offers non supported believes of what could happen in Custer County. The CCAA alleges that 17,000 overflights will make Custer County like living next to an international airport. See attached FAA AIR TRAFFIC reports on the number of fights for Pueblo, Colorado Springs and Denver 1995. You will please note that the 1995 operations for Pueblo was 76,542, Colorado Springs 214,036 and Denver 584,798. I do not see how 17,000 overflights in such a vast area could turn Custer County into an international airport. As for alleged damage to the environment, wildlife and the economy are not backed up with any facts, just "chicken little" hype of disinformation.

Sincerely,

Jimmie D Porter, Jr

cc: Governor Roy Romer
Senator Hank Brown
Senator Ben Nigthhorse Campbell
Congressman Scott McInnis
Custer County Action Association

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1

RESPONSES TO COMMENTS

Response to Comment No. 1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Program Manager; CAB EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5357

COPY

R. Mark Spink
18 Blackberry Ct.
Westcliffe, CO 81252
5/16/96

Dear Program Manager:

My name is Mark Spink and I live under the LaVeta MOA at 18 Blackberry Ct., Westcliffe, Colorado in one of countless developments. Ours is called Shumman and scattered among some 300 privately owned 5 acre parcels are over 40 completed homes, several more are under construction. Very real people live in these homes and most share a common value. They chose to build here because of the exquisite quiet of the near wilderness environment. I have documented on video, these shared feelings. But before I defend this "subjective" position let me in a more organized way state my objections to the DEIS for the Colorado Airspace Initiative.

The first failure of the DEIS and the whole process is the failure to produce an Operations and Resource Study (ORS) as required by your own Air Force. No mention is even made to it in the index, references or acronym listing. The only known reference to this need was a draft (ORS) for the abandoned Red Eye Complex. This failure has created a great deal of confusion and obfuscation during all of the proceedings. Need for the action has therefore escaped from scrutiny and resulted in confused and contentious discussions. 1

The second failure relates to the Initiatives failure to meet the USAF Master Plans desired and mandatory criteria. Desired criteria indicate an airspace 70 NM by 60 NM; the proposed space is less than ½ that - only 40 NM by 40 NM. Mandatory requirements specify that the proposed airspace not hinder flight operations into and out of DIA or any other public use airport. No information is supplied regarding inhibitions to flight operations in and out of Colo Springs new airport, or to Fremont County Air Port of the field at Westcliffe.

The third failure is to adequately deal with the "No Action alternative". Since the failure of the Red Eye Complex, an action that stirred a fire storm of resistance in our affected counties, the Guard saw fit to reduce dramatically the number of sorties 2

RESPONSES TO COMMENTS

Response to Comment No.1

A draft Operations and Resources Study (OARS) for the Colorado Airspace Initiative was being developed to replace the Redeye Complex OARS/Description of Proposed Action and Alternatives (DOPAA). Upon review of a draft OARS for Colorado Airspace Initiative, a decision to move directly to a DOPAA was made by the ANG. This DOPAA was used to initiate the Colorado Airspace Initiative EIS.

The Air Force Master Plan recommends optimum airspace dimensions to perform various training mission scenarios. However, these optimums may vary around the country based upon the specific training requirement, FAA aeronautical input and charting, and known avoidance areas based upon FAA and USAF flying rules and regulations. The CAI incorporated all of the above in the process used to develop the Colorado Airspace Initiative and other alternatives. Since the LaVeta MOA is an existing airspace, it does not impede air traffic into or out of the airports lying underneath. The ANG does not anticipate this to change because, under the Preferred Alternative, LaVeta MOA dimensions do not change and flights decrease slightly.

Response to Comment No.2

The frequency of training flights that have been observed by the public represent normal operations needed to fulfill USAF training requirements.

Response to Comment No.3

The baseline sortie numbers, published in the Draft EIS for the No-Action Alternative, are representative of typical annual use of the La Veta MOA. For example, annual usage for La Veta MOA for 1994 was 985 sorties and in 1995 was 994 sorties. The low utilization from 1991 to 1993 was due to the 140 WG conversion from the A-7 to the F-16 aircraft.

flown in the La Veta MOA and associated MITR's. Perhaps this was done in an attempt to reduce the resistance to the planned changes, but whatever the reason, the overflights were reduced. Whether intended or not, this action has created a new no action alternative and the new numbers must replace the old numbers. These accurate numbers have been repeatedly requested by us and never supplied. Our informed estimates for '91-'96 have not exceeded 346 in any of those years nor been below 216. Failure of the CANG to release this actual use data has caused a perversion of the intent of the DEIS. 3

The forth failure of the DEIS is a multi faceted failure and relates to all the conclusions drawn on the Schultz "synthesis curve P.G-6. Not only is all the data used in projecting the curve based on studies done over twenty years ago but they were gathered in urban settings and used sound from mixed sources, traffic, trains, etc. And the annoyance factor was drawn from people living in urban environments not near wilderness environments. Worse than that the noise was averaged over a 24 hour period - absurd on the face of it. Beyond that the quietest aircraft (F-16) of all those expected to fly in the MOA was used as the baseline. All these things would seem laughable if they did not result in a finding of "no significant impact." 4

The Fifth failure was complete and very disturbing when you consider that it was the most consistently voiced complaint and has to do with aesthetics, quality of life and solitude. All the people who cited the negative impact of overflights on aesthetics, life style, quality of life, destruction of solitude were DISMISSED as unverifiable and relegated to a category "potentially sensitive land use receptors." No attempt was made to measure impacts on people of these overflights. Universities have whole departments, research staffs are devoted to the measurement of these kinds of variables. Every state has bureaus of tourism busily measuring, every television network is busily probing these subjective variables. Since I serve in my own mind that the DEIS, much (was) (by your) consultants 5,6

RESPONSES TO COMMENTS

Response to Comment No.4

The Schultz curve has been updated and validated several times since its original publication, and is applicable to a wide range of noise environments. The 24-hour average Ldn represents the cumulative noise exposure over a day, accounting for the number of noise events, as well as their individual levels and durations.

Noise calculations were based on the actual aircraft flown or projected to fly. F-16s were included to the extent that they use the airspace, as were all other aircraft types.

Response to Comment No.5

Many citizens have expressed concern that their quality of life, which is based directly on the kind of lifestyle that they can enjoy while residing in or visiting the State of Colorado, will be changed by implementation of the CAI. The U.S. Air Force, including the ANG, has been conducting military aircraft operations in the Wet Mountain Valley and the San Luis Valley areas where people are most concerned for approximately 25 years. Most of the military airspace proposed under any of the alternatives is currently in use. Commercial aircraft overflights have also been taking place and will continue to do so. Citizens may notice changes in military aircraft overflights in certain areas associated with the CAI. The number of sorties are proposed to increase moderately in portions of the study area and decrease in others. Overall sorties will be reduced from 5,441 to 4,909 under the Preferred Alternative. The bottom altitudes of several airspaces where citizens are most concerned have been raised to reduce noise levels. Therefore, existing quality of life should not be changed.

(3) R. M. Spink

to determine what "spin" to put on each section of the DEIS. I find this omission to be inexcuseable. All one has to do is interview people, read their letters, count on your fingers and toes, go out to the environment in question — stay at my house, visit my town, listen to my birds, hear the schoolbus a mile away in the morning, have the fawn nursing in your yard — absurd omission!

The sixth failure was again an omission. There was no Environmental Justice Section. Our poor counties are to include all losses and the rich counties around Denver incur all financial gains related to the MOA and MTR changes. This cost shifting mandates an Environmental Justice Section. 7, 8

Other things that I find objectionable are: the failure to conduct DEIS sessions in directly affected areas where prior sessions were held, like Rye, Crestone, Moffett, Gardner. The failure to provide adequate time to respond to and evaluate the DEIS documents. The failure to use current and available economic data. 9, 10

Testing the sound levels on the flat and open plains instead of the mountainous terrain with all its amplifications and resonances. Failure to consider cumulative effects of multiple passes. Failure to consider the extent of "outside" users of this space once opened to use. Dismissal of the fire threat and possible economic impact. Distortion of the tourism impact on the area. 11

I feel worse about this every time you try to mollify me while failing to hear what I'm saying.

Resistantly yours,

Mark Spink —

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RESPONSES TO COMMENTS

Response to Comment No.6

The ANG cares about the people that live near their training areas and how they feel about the activity associated with training. The NEPA process is providing the ANG with an opportunity to hear exactly what the public feels about its proposal before any decisions are made. Every scoping comment and every comment on the Draft EIS sent to the ANG has been read and incorporated into the administrative record for the proposal. Public comments have provided a better picture of what subjects the public wanted addressed in the document and have enabled the ANG to improve the EIS by adding or expanding to discussions in the Final EIS. Examples of added or expanded discussions include human health effects, natural quiet, environmental justice, amongst others.

Response to Comment No.7

A discussion on environmental justice has been added to the Final EIS. This new discussion may be found in Subsection 4.19. The concept of environmental justice addresses the issue of determining if actions of Federal agencies disproportionally impact the human health and environmental conditions in minority communities and low-income communities. The majority of the airspace associated with the alternatives addressed in the EIS has been in existence for many years and the changes being proposed would not significantly alter the current configuration. Environmental justice issues would be more relevant for new airspace, which occurs primarily in the southeastern portion of the State of Colorado. This new airspace does not affect any single minority group and overlies a wide variety of socioeconomic conditions.

Response to Comment No.8

The operation of the 140 WG out of Buckley Air National Guard Base in Aurora has an obvious economic impact for the immediate surrounding communities. In 1994, the payroll for the Colorado Air National Guard personnel stationed at Buckley exceeded $34 million and local expenditures, primarily contracting and purchasing, were almost $22 million. The State of Colorado collects property taxes from the men and women who work at Buckley and live in the community, and collects sales tax dollars from all purchases made within the State by ANG members. These revenue sources are a part of the general funds for the State which are distributed on a yearly basis by the General Assembly to every county in the State.

RESPONSES TO COMMENTS

Response to Comment No.9

The hearing locations were selected to ensure the inclusion of a wide geographic representation of potentially interested parties within the affected areas to ensure maximum participation. The availability of meeting rooms with the requisite facilities, that could be reserved on the dates required, also was a significant factor in the selection process. Input from the Citizens Working Group and its members was also considered. These factors were considered more significant than selecting a site primarily on the basis that it might be directly under an airspace.

Response to Comment No.10

The Council on Environmental Quality provides guidelines for the preparation of Environmental Impact Statements, and the review of EISs by the public and various government agencies. These guidelines direct agencies to "allow not less than 45 days for comments on draft statements" (Section 1506.10 of these guidelines). The comment period for the CAI Draft EIS officially opened March 29, 1996 with the Notice of Availability published in the Federal Register. The initial mailing of the statement to over 750 addressees was accomplished on March 20, 1996 prior to the NOA. The close of the comment period was initially published as June 5, 1996 (68 days), and then extended to July 12, 1996 (105 days).

Response to Comment No.11

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

309

Wind Walkers' Ridge / El Sitio del Caballo Negro

Aspen Mountain Ranch / Centennial Ranch

Westcliffe, Colorado

Matthew G. & Lauren Pursell von Hobe

Registered Black Percherons and German Shepherds

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

May 16, 1996

I do not look at you as my enemy. You are men and women who are professionals and who most certainly take pride in doing your job well. And this I respect. I've heard and read the invective, heard and read the reports, heard and read the "facts". I am not in a position to dispute most of them - on either side. I am not against a strong defensive capability; my ancestors and family have served in every armed conflict since, and including, the revolution. I am a member of the Sons of the American Revolution, you would be wrong to suggest I am not patriotic. Do you have enough air space in which to fly already? I don't know. Are there still threats to American security interests in the world or has the end of the Cold War signaled an end to the more nefarious entities? I don't know. I am not against what you do. But where you do it is another matter altogether - if you do it in this little valley you hurt me, you hurt my family and you hurt my way of life. I would tell you a little of myself so you may perhaps see that there is a human being behind this letter.

I grew up outside of a tiny town in the mid-west and I came, at a very early age, to treasure the golden silence of nature as well as her voices. My schooling took me to a larger city and my career took me to Austin, TX., a state capital and neighbor to an air force base. Ultimately I came to Washington, DC to continue my Federal career. I enjoyed my job, and there were many things Washington had to offer that I enjoyed as well. But, ultimately, eight years of that environment took it's toll on me. It is never truly dark in Washington, nor is it ever truly light, thanks to street lamps and pollution. There is no true silence to be found - a jet flying overhead is not even heard against the constant thrum of traffic, construction and people.

She who was to become my wife showed Colorado to me. And I fell in love, not only with the woman, but with the Wet Mountain Valley. And so I made a choice - a gamble to be sure. I "retired" at the age of 35 and moved, with no job waiting for me, to Colorado. And my gamble paid off - land I could afford and a challenging job with the Department of Justice. And now we are trying to live gently on the land, raising horses, dogs and, starting in October, our family in as pristine and utterly beautiful an environment as we could hope to imagine.

It distills to this - I left the noise and pollution of the big city, and the monetary and career opportunities that accompany, to retreat to the serenity of land with a big view. For me, the trade was worth it. But that you propose to move your job site to this valley discourages and dismays me. More plainly put: we would rather hear the scream of a hawk, hunting than the shriek of a jet as it tears open the sky. We would rather hear the rumble of a summer thunderstorm as it marches across the valley than boom of the sound barrier shattering as it jolts every living thing into an adrenaline-laden panic. I expect a barrage of noise when I visit the big city; I cringe when I find it in my home having gone to fairly extreme efforts to find a quiet place!

1

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

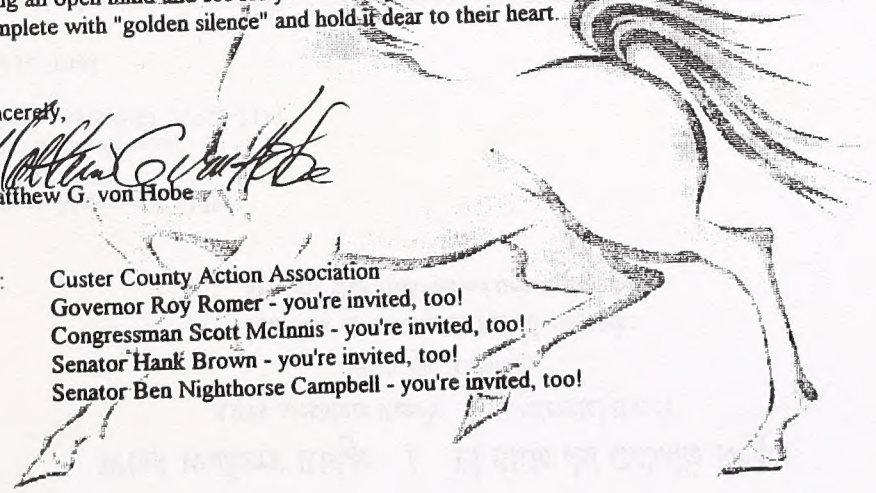
Response to Comment No.2

There would be some changes in sortie numbers, noise levels, and airspace dimensions under the Original Proposal and the Preferred Alternative addressed in the EIS. However, overall flying hours of the 140 WG will be reduced from 5005 hours to 4600 hours. When compared to existing military aircraft training in the study area, these changes would not change the current levels of solitude and peace and quiet experienced by residents. As under current conditions, noise from military aircraft operations may periodically disturb citizens and affect their enjoyment of solitude; however, opportunities for abundant periods of total peace and quiet would continue as under present conditions.

This situation calls to mind an episode of M*A S*H*: a slightly injured, downed flyer is brought to the 4077th for treatment. He tells Hawkeye how beautiful it is to fly in the blue of the sky, drop his load and return to base. Hawkeye "ruins" everything for him by taking him into the operating room and showing him the effects his bombs have on living flesh. It must be thrilling to take a seat in the cockpit of a high-performance machine and hurtle skyward. But I wonder, do you have any idea of the impact of your flights on those over whom you fly? It takes ***minutes*** to return to quiet after a passenger jet flies overhead. Perhaps it would not be unfair to ask you to see this "Eden" from another perspective.

High on a ridge, "Wind Walkers' Ridge" for scarcely can you look about without seeing a raptor riding a thermal, is a tiny little cabin. It is a retreat for us and for our friends at 9,800 feet. It is our "someday" place where we hope to build our own aerie on a larger scale. In the meantime, it is a place for one to go to recapture peace; to hear the wind in the aspens, smell the sun-warmed pines, hear coyote serenades at night, and, if the wind is right, hear the choir of wolves from the refuge at dusk. I invite you; this is what so many are fighting about and fighting for, but I invite you with no strings attached save this - come, see, listen, smell and reflect. No discussions unless you wish them. No mob to harangue you. No "grand tour" unless you request it. Just bring an open mind and see for yourself why someone would embrace this environment complete with "golden silence" and hold it dear to their heart.

2



Sincerely,

Matthew G. von Hobe

xc: Custer County Action Association
Governor Roy Romer - you're invited, too!
Congressman Scott McInnis - you're invited, too!
Senator Hank Brown - you're invited, too!
Senator Ben Nighthorse Campbell - you're invited, too!

UNICOR
Federal Prison Industries, Inc.
Department of Justice
Federal Bureau of Prisons

MATTHEW G. VON HOBE
Computer Specialist
System Administrator

FEDERAL CORRECTIONAL INSTITUTION
P. O. Box 9000
5880 State Hwy. 67 South
Florence, Colorado 81226

FTS: 700-739-4707
Phone: 719-784-5026
Pager: 719-560-8189
FAX: 719-784-5021

May 17, 1996

1821 Court St.
Pueblo, CO 81003

Program Manager
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

To Whom It May Concern,

As a property owner in the Wet Mountain valley in Custer County Colorado, I am writing to strongly voice my objection to the Colorado Airspace Initiative. I feel the Draft Environmental Impact Statement (DEIS) prepared by the Air National Guard is a complete and total outrage. Specifically, I am referring to the day-night averaging noise analysis used in this document. To average a sudden burst of noise (over 110 decibels) over a 24 hour period and then state that it will not disturb the peace and tranquillity of those below is simply ludicrous. 1

The DEIS uses a 65 decibel level cutoff point for annoyance. The Federal Interagency Committee for Noise (FICON) says that an average noise level above 65 decibels is annoying for communities next to **commercial airports**. The Wet Mountain valley is incredibly quiet day and night, and the DEIS admits that the Region of Impact in the valley is not the same kind of area as a community next to an airport, yet it uses the same standard of 65 decibels over a 24 hour average as an acceptable level. To use this standard and this type of remarkably ridiculous analysis in this setting and conclude that there is no impact on our valley is farcical. 2

We are threatened with an overrun of approximately 17,000 extremely loud overflights per year. This equates to an adverse effect on wildlife, risks of crashes and forest fires, loss of property values,, destruction of our economy and quality of life, detrimental environmental effects, and incredible noise pollution. The Air National Guard DEIS claims this noise will have no impact on us. I can only conclude that they are not being realistic or truthful with the facts. 3

I strongly urge you to support the elimination of the Airburst Military Operations Area (MOA), the LaVeta MOA and all Military Training Routes (MTRs) leading to the Airburst Range. 4

Sincerely,

Jeffrey M. Cleaver

311

RESPONSES TO COMMENTS

Response to Comment No.1

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

Response to Comment No.2

The approach used in the EIS has been modified. The Federal Interagency Committee on Noise (FICON), representing a variety of Federal agencies with a mix of concerns associated with aircraft noise, reviewed aircraft noise analyses issues in 1992. This committee's report (FICON 1992) continued an approach to evaluating relative impacts associated with aircraft noise that has been recognized by noise analysis experts as the most widely endorsed and comprehensive approach to aircraft noise analysis available. This approach to noise analysis was incorporated into the analyses associated with the Draft EIS. In general, Federal land use compatibility criteria are derivatives of guidelines first devised for land near airports. All land use compatibility is based on the use of Day-Night Average Sound Level (abbreviated as DNL or Ldn) as the descriptor representing community noise environments. The criteria treat areas below DNL 65 dB as compatible for all uses, including residential, and they treat DNL 65 dB as a threshold for significant exposure. There is no generally accepted method for treating rural areas differently for these purposes.

However, many EIS reviewers, including some members of the Federal regulatory community, felt the application of the FICON standards, and the 65 dB threshold, to a rural setting was inappropriate for such areas with more quiet ambient noise conditions. Consequently, the use of the 65 dB threshold as the sole means to assess relative impacts or the acceptability of noise levels associated with aircraft operations addressed in the EIS has been modified and the analysis now includes additional information to evaluate potential impacts.

064L Jeffrey M. Cleaver

RESPONSES TO COMMENTS

Response to Comment No.3

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Response to Comment No.4

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

John and Jeanene Comerford
1174 County Road 285
Westcliffe, CO 81252
May 17, 1996

Harry Knudson
ANGRC\CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

To Whom it May Concern:

I would like to express my grave concern upon reviewing the DEIS and the revised plans for the La Veta MOA. This appears to be a whitewashing of the matter, with very little substantive change.

After having lived in this area for 30 years, we have recently mortgaged our future to own a more pristine, secluded corner of Custer County. If the La Veta MOA goes through as planned, we will have approximately 15 to 40 flights per day cornering over our property. This prospect is extremely disturbing! These planes don't fly over at even 300' AGL - they are flying by NOW below the level of our house!

We have numerous Bald Eagles in our area, the northeast corner of La Veta MOA. We would demand that their nests be plotted and the jets be required to fly avoidance of them. The traffic projected from Airburst C and the MTRs would have a severe negetive effect on the eagles and the substantial elk, deer, and Bighorn Sheep in this area. I have personally witnessed a herd of elk stampeded by a jet flyover. The herd ran approximately 3 miles before finally stopping. Airburst C should be eliminated and the MTRs moved further to the east. 1

In the last five years the number of flyovers has been scaled back dramatically. We have seen property values boom, the numbers of elk and deer have gone up, and the skies have been relatively quiet. If the Air National Guard would maintain these levels, we could live with it.

Numbers can be manipulated to achieve whatever result is desired, as evidenced by the DEIS. These flyovers have a very negative effect on the enjoyment of our ranch. Why has the Air National Guard avoided asking the property owners directly how they feel about these flyovers? A comprehensive EIS should include polling of all landowners and residents under the MOA. When the DEIS testifies that 40 low level flights per day, complete with shock effect, noise, and pollution, will cause "no significant impact," it is WRONG.

We live under a civilian light aircraft VFR corridor, as evidenced by the multiple airplane wrecks littering the hills around our home. How can you mix this traffic, which is attempting to navigate Hardscrabble Pass, with military hardware, and claim there will be "no significant impact"? 2

Of primary concern to us is the socio-economic impact on the valley and its people. Custer County is the 10th fastest growing county in the United States. People come to escape the noise and congestion; to live and retire in the peaceful scenic beauty of our mountains. Our livelihood is based on home construction in Custer and Fremont counties. The proposed flyovers would destroy the solitude, and the countless businesses which are built on the influx of homeowners and tourists. The loss of jobs in the area will be quite significant. The finding of "no significant impact" on our economy is FALSE. 3

RESPONSES TO COMMENTS

Response to Comment No.1

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Response to Comment No.2

Safety is one of the ANG's highest priorities deserving continuous emphasis. Immediate changes are made to programs and procedures whenever they will enhance safety. Analyses for the EIS assessed the potential conflicts between operations of military and civilian aircraft at airports, along air routes, and in other operational areas. It was determined that there are no major conflicts with local operations that cannot be made safe through continuous education and awareness programs. Military pilots at the 140 WG and transient pilots who fly the airspace for which the 140 WG has scheduling and management responsibility are made aware of local operations such as crop dusting, airports, and airways. These awareness programs, along with FAA restrictions to remain at least 1,500 feet above or three miles laterally from charted public use airports, should ensure safe operations with minimum disruptions to military and civilian aircraft.

Is the Air Force prepared to repay all of us for income lost, lower property values, and a decreased quality of life? 4,5

The so-called noise study uses irrelevent data and comparisons to measure the effect of aircraft noise on our area. The Schultz study is based on levels of noise in large cities, not the sudden noise of jets flying over wilderness areas. The noise from F-16 flyovers at Cheyenne Wells does not have the same effect as B-52 flyovers in this echo chamber we call a valley. A large part of the MOA is comprised of small valleys and peaks which amplify and echo the noise created by a jet flyover. The population in these areas is increasing rapidly. The judgement of "no significant impact" on our quiet corner of the world is FALSE. 6

The most disturbing thing about the DEIS is the way the Air Force has manipulated or disregarded data and facts which are counter to their preconceived plan. Our taxes are paying for this study, which they are using to whitewash the issue in order to ram it through. We do not appreciate our taxes being used against us and feel very strongly that the implementation of the Colorado Airspace Initiative will destroy our local economy and our way of life. 7

Sincerely,

John and Jeanene Comerford

RESPONSES TO COMMENTS

Response to Comment No.3

Since 1970, many Colorado counties, including Custer County, have experienced an increase in total population, the number of housing units, property values, and the general local economy. Because many factors contribute to socioeconomic conditions and no absolute link between aircraft overflights and economic changes can be determined, it is not possible to conclude that an increase (or decrease) in building activity is directly attributable to a change in the number of sorties flown. Custer County appears to have experienced growth during periods of high and low aircraft activity levels. A review of socioeconomic conditions across the entire CAI study area does not reveal widespread, repetitive, or consistent patterns. For example, while some counties may have experienced an increase in population, housing, and employment, other counties may have experienced a decrease in these conditions. Additionally, some counties may have experienced a combination of growth in population and housing but a decline in local economic conditions.

Response to Comment No.4

In order to address concerns regarding possible devaluation of real estate, the EIS evaluated historical data for property values. This analysis compares counties within the study area for the CAI, including those areas with currently utilized military airspace, to counties outside the study area. The results indicate that all counties experienced increases in property values. Further, in terms of median property values, counties within the study area for the CAI increased 99.71 percent compared to counties outside the study area, which increased 57.74 percent. Whereas a report published by the Federal Aviation Administration concludes "that noise has been shown to decrease the value of property by only a small amount--approximately 1 percent decrease per decibel (DNL)," this analysis applies to airport/airfield environments and not land areas underlying military training airspace. Therefore, although it is not possible to absolutely conclude that counties experiencing military aircraft overflights incur any greater change in real estate values than counties not experiencing similar overflight activity, it is not likely that real estate values would drop as a result of the CAI.

Response to Comment No.5

Many citizens have expressed concern that their quality of life, which is based directly on the kind of lifestyle that they can enjoy while residing in or visiting the State of Colorado, will be changed by implementation of the CAI. The U.S. Air Force, including the ANG, has been conducting military aircraft operations in the Wet Mountain Valley and the San Luis Valley areas where people are most concerned for approximately 25 years. Most of the military airspace proposed under any of the alternatives is currently in use. Commercial aircraft overflights have also been taking place and will continue to do so. Citizens may notice changes in military aircraft overflights in certain areas associated with the CAI. The number of sorties are proposed to increase moderately in portions of the study area and decrease in others. Overall sorties will be reduced from 5,441 to 4,909 under the Preferred Alternative. The bottom altitudes of several airspaces where citizens are most concerned have been raised to reduce noise levels. Therefore, existing quality of life should not be changed.

Response to Comment No.6

The "Schultz curve" represents data from a wide range of noise environments, and is a widely accepted measure of the cumulative impact of noise. The Ldnmr quantity used in this study accounts for differences in aircraft type, such as F-16 versus B-52. An additional discussion of the effects of local terrain on noise levels has been added to Subsection 4.4 of the Final EIS.

Response to Comment No.7

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

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Richard C. Comerford
P.O. Box 517
Westcliffe, CO 81252
May 17, 1996

Harry Knudson
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

To Whom It May Concern:
Re: the proposed Colorado Airspace Initiative, esp. the La Veta MOA and Airburst C

I own ranch property along the western base of Lead and Hardscrabble Mountains. I would like to relay a couple of stories reletive to low level flight noise and its effect on both domestic and wildlife animals.

On a day in late summer, 1994, I was saddling my horse and had one foot in the stirrup when a low flying military jet went screaming overhead. The horse went ballistic. I was thrown behind the horse and kicked by both back legs in the abdomen. The result was my small intestine severed, and large intestine ripped severely. I spent two weeks in the hospital followed by 6 months recovery. I don't think I could take another hit like that at 69 years old. 1

The elk in our calving area spook whenever a low flying plane screams nearby. I have seen them run for several miles without stopping. Many small elk calves get left behind, tangled in barbed wire. Many are maimed for life, and are seen crippled as young adults. The final EIS should include documentation of the effect of jet flyovers on game. 2

I have seen numerous Bald Eagles in this area, also. Documentation of the effect of jet flyovers on nesting eagles should also be included.

We landowners would like to have our day in court and publicly tell our thoughts on how low flying jets will effect our daily life and the abundant wildlife in our area.

The so-called noise study is bogus, and no consideration was given to the effect on our quality of life. We, the people, do not want the La Veta MOA, Airburst C, or the MTRs flying over our land. 3 4 5

Sincerely,

Richard C. Comerford

cc Governor Roy Romer
Paul Gallant
Senator Hank Brown
Senator Ben Nighthorse Campbell
Congressman Scott McInnis
Custer County Action Association

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

Studies conducted on wildlife have shown that numerous wildlife species have the ability to adapt to the presence of man and various man-made sound sources, including jet aircraft noise. While the noise generated from low-altitude military overflights may be initially startling, habituation to jet aircraft noise occurs with most wildlife species. Species-specific responses to low-altitude overflights vary considerably, and responses from individual animals may have the potential to cause injury. However, wildlife populations are usually affected only when a variety of factors work in combination to impact them, including declines or fluctuations in the availability of a food source, habitat destruction or alteration, predation, hunting, trapping, poaching, disease, or inclement weather, rather than noise alone. Normally, it would be unrealistic to predict or attribute any wildlife population declines to a single stressor, such as noise. In addition, no published scientific evidence was identified that indicated harm may occur to wildlife as a result of exposure to the levels of noise generated by military aircraft that would utilize the airspace associated with the Colorado Airspace Initiative.

Response to Comment No.3

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.4

Many citizens have expressed concern that their quality of life, which is based directly on the kind of lifestyle that they can enjoy while residing in or visiting the State of Colorado, will be changed by implementation of the CAI. The U.S. Air Force, including the ANG, has been conducting military aircraft operations in the Wet Mountain Valley and the San Luis Valley areas where people are most concerned for approximately 25 years. Most of the military airspace proposed under any of the alternatives is currently in use. Commercial aircraft overflights have also been taking place and will continue to do so. Citizens may notice changes in military aircraft overflights in certain areas associated with the CAI. The number of sorties are proposed to increase moderately in portions of the study area and decrease in others. Overall sorties will be reduced from 5,441 to 4,909 under the Preferred Alternative. The bottom altitudes of several airspaces where citizens are most concerned have been raised to reduce noise levels. Therefore, existing quality of life should not be changed.

Response to Comment No.5

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

May 17, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Ave
Andrews AFB, MD 20762-5157

We are writing to convey our objections to the Colorado Airspace Initiative. My husband and I planned to build our retirement home in Westcliffe and enjoy the peace and serenity of that beautiful area. Military training over this area will destroy the way of life we hoped to obtain by living in that area. We adamantly insist that all activities leading to the Airburst Range be eliminated. 1 2

Sincerely

Patti Draper

Lee and Patti Draper

319

RESPONSES TO COMMENTS

Response to Comment No.1

There would be some changes in sortie numbers, noise levels, and airspace dimensions under the Original Proposal and the Preferred Alternative addressed in the EIS. However, overall flying hours of the 140 WG will be reduced from 5005 hours to 4600 hours. When compared to existing military aircraft training in the study area, these changes would not change the current levels of solitude and peace and quiet experienced by residents. As under current conditions, noise from military aircraft operations may periodically disturb citizens and affect their enjoyment of solitude; however, opportunities for abundant periods of total peace and quiet would continue as under present conditions.

Response to Comment No.2

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

Steven G. Grabowski, M.D.

2141 Bonvue Drive
Golden, Colorado 80401

TELEPHONE: 303-279-9545 FAX: 303-279-9591

May 17, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

TO WHOM IT MAY CONCERN:

320

It just came to my attention that the Air National Guard is planning to begin low-altitude training in the San Luis and Wet Mountain Valleys. I think it is a terrible idea. I lived in the San Luis Valley for 2 years as a Public Health Officer. I am now living in the Denver area, but still travel there as often as possible when I wish to "get away from it all." 1

These areas are composed of scattered small rural communities surrounded by some of the most beautiful and secluded outdoor recreation and wilderness area in the state. To introduce low-flying aircraft, especially of the military type, in training exercises would have a significantly negative impact on this area. It contradicts common sense to say that a peaceful environment with an ambient noise level of 12-30 decibels will not be adversely affected by low-flying aircraft with noise levels of 110+ decibels! Since decibel gradation is logarithmic, this is a tremendous increase in noise level. Such an increase would certainly cause stress to wildlife, as well as spoil the solitude of persons living and enjoying the area. 2

As a medical professional and proud citizen of this beautiful state of Colorado, I strongly urge you to decline any further consideration of this proposed low- or even moderate-altitude training over any environmentally sensitive area in the state. Activities such as these only devalue Colorado's most precious resource -- its beautiful environment. 3

Sincerely,

Steven G. Grabowski, M.D.

cc: Colorado Airspace Alliance
Governer Roy Romer

RESPONSES TO COMMENTS

Response to Comment No.1

Because of the many avenues through which the public has received information on the CAI, including both factual and nonfactual information from various sources, some confusion may exist about the existing airspace and proposed new airspace, particularly for the Wet Mountain Valley and the San Luis Valley. The La Veta MOA is an existing airspace. No changes are proposed for this airspace.

VR-413 is also an existing airspace; however, under the Preferred Alternative, its width would be reduced in size and its eastern boundary moved away from the Sangre de Cristo Mountains. The minimum altitude would be raised from surface level to 500 feet above ground level. VR-412, which is currently a low-altitude route through the Wet Mountain Valley, would be eliminated altogether under the Preferred Alternative, thus eliminating low-altitude training completely from the Wet Mountain Valley. Sorties over the Wet Mountain Valley also are reduced under the Preferred Alternative.

Response to Comment No.2

The analysis method used accounts for the noise levels of individual aircraft and how often these levels will occur. The negative impact of this noise is considered for each affected area.

Response to Comment No.3

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

May 17, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD, 20762-5157

Re: Colorado Airspace Initiative - Draft Environmental Impact Statement.

I am addressing this letter to you at the urging of the "Custer County Action Association." However, not in the context that they obviously wish me to. **I AM IN FAVOR OF THE MOA!** I absolutely **DISAGREE** with the Custer County Action Association and what they stand for. From what I have determined, they are little more than a "boot-licking" front organization for Tom Redman, the owner of Wolf Springs Ranch, who is personally against the MOA and funds their organization. Please also note that may of those opposed to this plan are people who do not often reside in any of the flight zone areas for any periods of time.

It is interesting to note that attendance at Custer County Action Association meetings has dropped considerably and that they are begging people to attend their functions. They have little support here.

Their arguments are weak, they cite:

That the noise will have a adverse effect on wildlife. I firmly believe that the effect of your flights on wildlife will not be nearly as adverse to wildlife as the past wholesale marketing and sale of the valley by Mr. Senderhauf has had. Wildlife will adjust. Nor, will your flights have nearly the adverse effect on wildlife that Mr. Redman's fence around his property (to trap the wildlife on his property so he can charge hunters high fees or allow a "favor" to one of his "Good Ol' Boy" business associates to hunt there).

The risk of crashes and forest fires. I believe all of our plane crashes have been by private (not military) pilots. Using the same argument, I believe we should than also ban tourism into the valley and mountains (the tourists could start a fire), vehicles on our roads (they could and do crash) and especially all of the noisy, annoying private aircraft (including Mr. Redman's private jet) taking off and landing at our local airport. We should especially ban the jackass that likes to "buzz" elk during hunting season, and DeWeese Lake during tourist season.

The loss of property values. I purchased my current property in 1981 when the flights were in progress and experienced the first and only drop in property values when the Conquisitor Ski Area closed (and incidentally, your flights over the valley stopped abut the same time).

321

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RESPONSES TO COMMENTS

Response to Comment No. 1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

069L Richard T. Heinrich

Destruction of our economy and quality of life. If less air traffic is so crucial to our way of life, then why have we expanded and improved (paved) our local airport? Truly, the private plans that fly around for 30 minutes to an hour at a time with that constant droning sound are much more irritating than a few seconds of a louder noise from MOA jets. Based on his past practice, I believe that Mr. Senderhauf has more concern that he will not be able to turn as high a profit as he sells the valley piece-by-piece than concern for the "quality of life" in the valley.

I also find the Custer County Action Association comments like, "and noise pollution like we have never heard (unless you have lived next to an international airport)." interesting, because at one time I did reside near LAX, and you do adjust to the noise.

And, "Their job is to protect us, not destroy us!" These people are the same folks who are delighted to accept any money the military brings into a community, but hate the servicemen who bring it because they change the community (the money is nice, but keep your guys on the base). They are the same people who would demand protection, but are not willing to experience a little inconvenience while our men train so that that MOA pilots are able to provide that "first rate" demanded protection.

In the past, I have always enjoyed the flights of your planes over our valley. It was a delight to look up and see the stars and bars on the wings of the birds passing over. When working in the yard or field, I waved at the planes as they passed and was thrilled when the pilot noticed me and dipped his wing or did a complete flip to acknowledge me. I was always disappointed when your planes flew over and I ran out of the house to watch, only to discover I had missed them. Myself and many others I have spoken to in the Wet Mountain Valley have missed you. **PLEASE FLY AGAIN.**

Sincerely,

Richard T. Heinrich
216 County Road 137
Post Office Box 870
Westcliffe, CO 81252-0870
Tele: 719-783-2575
Fax: 719-783-2927 or 2575

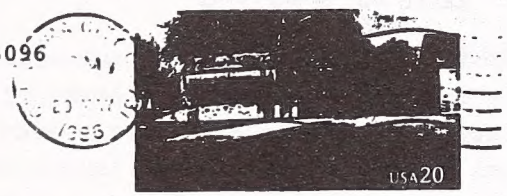
"Pay no attention to the man behind the curtain!" Wizard of Oz.
Remember, he is only the support of an illusion.

May 17th, 1996

Program Mgr., CAI EIS
ANGRC/CEVP, 3500 Fetchet Ave.
Andrews AFB, MD 20762-5157
Dear Sir: I strongly object to the Colo. Airspace Initiative because; (1) Loud decibel noise levels in a very quiet natural environment would be a nuisance to families who seek the tranquility of Custer Co., Colo. (2) the DEIS cut off point of 65 decibels is ok for Denver but extremely high for rural Colo. I incest that you eliminate MTRs leading to the Airburst Range, La Veta MOA and MOA Airburst.
Sincerely, Carl & Vicki Hutto & Family
Westcliff, Co. property owners @ Cuerno Verde Pines
CC to; Hon. Roy Romer Gov., Hon. Ben Campbell US Sen.
Hon. Scott McInnis US Cong. & Hon. Hank Brown US Sen.
Please include this in the Final EIS.
Return address is; Carl & Vicki Hutto, 1712 Sandstone,
Carl & Vicki Hutto Weatherford, Okla. 73096
Ph. # 405-772-7997

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Carl & Vicki Hutto
1712 Sandstone
Weatherford, Ok. 73096



Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Ave.
Andrews AFB, MD 20762-5157

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RESPONSES TO COMMENTS

Response to Comment No.1

The concept of natural quiet as a resource has been added to the Final EIS. This new discussion may be found in Subsection 4.14.

Response to Comment No.2

The approach used in the EIS has been modified. The Federal Interagency Committee on Noise (FICON), representing a variety of Federal agencies with a mix of concerns associated with aircraft noise, reviewed aircraft noise analyses issues in 1992. This committee's report (FICON 1992) continued an approach to evaluating relative impacts associated with aircraft noise that has been recognized by noise analysis experts as the most widely endorsed and comprehensive approach to aircraft noise analysis available. This approach to noise analysis was incorporated into the analyses associated with the Draft EIS. In general, Federal land use compatibility criteria are derivatives of guidelines first devised for land near airports. All land use compatibility is based on the use of Day-Night Average Sound Level (abbreviated as DNL or Ldn) as the descriptor representing community noise environments. The criteria treat areas below DNL 65 dB as compatible for all uses, including residential, and they treat DNL 65 dB as a threshold for significant exposure. There is no generally accepted method for treating rural areas differently for these purposes.

However, many EIS reviewers, including some members of the Federal regulatory community, felt the application of the FICON standards, and the 65 dB threshold, to a rural setting was inappropriate for such areas with more quiet ambient noise conditions. Consequently, the use of the 65 dB threshold as the sole means to assess relative impacts or the acceptability of noise levels associated with aircraft operations addressed in the EIS has been modified and the analysis now includes additional information to evaluate potential impacts.

Response to Comment No.3

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

SHIPPED MAY 17 1996

Harold Smith & Sharon Strascina
0177 Co. Rd. #27A
Texas Creek , Co. 81223

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

Dear Sir,

As concerned property owners and citizens of Fremont County, we are writing this letter to express our feelings regarding MOA. We purchased property here in 1978 after falling in love with the peace and tranquility. We are appalled at the idea of forty flights overhead daily, disturbing our quality of life. After all, what are we training for? What war would this aircraft be used for other than a battle with a third-world country. How are these planes going to combat a nuclear warhead? Please, lets be realistic. We vote and pay taxes just like our urban counterparts and our voice should hold just as much importance. 1 2

In closing, we would like to have this letter put on file as citizens against MOA.

Sincerely,

Harold Smith

Harold Smith

Sharon Strascina

Sharon Strascina

324

RESPONSES TO COMMENTS

Response to Comment No.1

There would be some changes in sortie numbers, noise levels, and airspace dimensions under the Original Proposal and the Preferred Alternative addressed in the EIS. However, overall flying hours of the 140 WG will be reduced from 5005 hours to 4600 hours. When compared to existing military aircraft training in the study area, these changes would not change the current levels of solitude and peace and quiet experienced by residents. As under current conditions, noise from military aircraft operations may periodically disturb citizens and affect their enjoyment of solitude; however, opportunities for abundant periods of total peace and quiet would continue as under present conditions.

Response to Comment No.2

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

SHIPPED MAY 17 1996

THis letter is in response to the Colorado Airspace Initiative Draft Environmental Impact Statement.

In 1978, My husband and I purchased 160 acres in the Wet Mountain Valley, Westcliff area. It was a dream, that has become reality that we would have a residence there where we would get away from the NOISE and hassles of city life. The Air National Guard has decided that they need to fly over the area where we live, and have virtually driven their desires down our throats. The Environmental impact statement is out,and it's our turn to protest.I would like to point out that the Military APPROPRIATED the are known as Pinon Canon for their use,and I feel strongly that they should do their fly overs in that area,instead of disturbing the persons that have property in our area. I would also like to state that at least three times last summer,our house was BUZZED by three planes at less than 30 feet from our rooftop.It was very frightening, they could have crashed, destroyed our property,and themselves in the process. We did not purchase this property so that we could be harassed by the likes of the arrogant pilots,who believe that they have the right to PLAY in their JETS.
I would like to urge you to defend the persons in our area by helping us defeat the AIRBURST MOA,LA VETA MOA,AND ALL MTR'S LEADING TO THE AIRBURST RANGE

It has also bee explianed to us that they will want to practise Dumping fuel at high altitude,and they would like us to believe that this will not negatively impact the environment, they also show statistics th at the noise level will not be oabve the accepted decibel levels based on the Average established by the DEIS. This si nonsesne,they have doctored the Statistics to suit their needs. Please support the constituents in your state by helping us defeat this issue

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5
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Thank You;

Johanna Trimble

Kenton E Trimble
Johanna Trimble
5672 Colo Hwy 165
Wetmore, Colo. 81253

parkview
EPISCOPAL MEDICAL CENTER
400 West Eighteenth Street Pueblo, Colorado 81003 719 584 4000

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RESPONSES TO COMMENTS

Response to Comment No.1

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Response to Comment No.2

The use of other training areas was examined as part of the development of the alternatives studied in detail in the EIS in Subsection 2.3. The proposal was designed to minimize conflicts with potentially sensitive areas while providing the training resources necessary to meet military readiness requirements. Specific narrowing criteria for the selection of military training airspace (see Subsection 2.3.3 in Volume I) were used to evaluate other locations, and no alternative training areas were identified that could be substituted for the airspace configuration proposed in the alternatives studied in the EIS.

The primary user of the airspace included in the Colorado Airspace Initiative is the 140 WG based at Buckley Air National Guard Base in Aurora, Colorado. Because of limited resources and aeronautical constraints, virtually all of our nation's fighter units train in airspace that is within a "tank of gas" of the aircrews' base.

RESPONSES TO COMMENTS

Response to Comment No.3

The ANG takes the public's concerns about pilot accountability very seriously. Any misconduct by a military pilot is a serious matter. If a member of the public is experiencing any problems with the military's operations in any of the airspace in an area that affects a person directly, the public affairs officer at the nearest military installation should be contacted immediately, or call (800) 582-8507.

The Federal Aviation Administration and each military service have very strict rules to ensure pilots stay within defined training airspace. The rules govern minimum altitudes, maximum speed, and type maneuvers that can be performed inside and outside designated training airspace. Military commanders have the authority to suspend pilots who willfully violate flight rules, such as flying outside designated training airspace. The military closely manages the airspace they use to ensure they do not exceed planned parameters.

Response to Comment No.4

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

Response to Comment No.5

Fuel dumping by aircraft using the CAI airspace is not anticipated. In addition, the F-16 aircraft is not capable of dumping fuel.

Response to Comment No.6

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Jane Augustine
6512 County Road 140
Westcliffe, Colorado 81252 phone/fax: 719-783-2512

18 May 1996

Program Manager, CAI EIS
ANGRC/CEPV
3500 Fetchet Avenue
Andrews AFB, Maryland 210762-5157

To the Program Manager:

One fact emerges, although it was not intended to, from the deceptive and narrowly defined statistical approaches of the Draft Environmental Impact Statement (DEIS) on the Colorado Airspace Initiative (CAI). The noise impact from the CAI's expanded Military Operations Area (MOA) will destroy the quality of life in the Wet Mountain valley and the local ranching and tourist economy. 1 2

The falsely low figures on noise impact have been created by the inappropriate averaging of 24-hour Day-Night "noise events." Our valley is very quiet; 30 decibels ambient noise is typical. If a jet flies over suddenly at 110 decibels, that noise has been <u>averaged</u> over a 24 hour period, making the result far below the level of 65 decibels, the cutoff point used by the DEIS. 3

The 65-decibel figure, however, is the maximum average noise level acceptable for a community living <u>near a commercial airport</u>, according to the Federal Interagency Committee on Noise. Our community is not that kind of area, the DEIS admits, but it still applies this farcical standard in our completely different setting to get the results the CAI wants. 4

The CAI wants to fly more than 3,000 sorties per year or 17,000 flights, about 40 every day. The token raising of the minimum altitude from 300 to 500 feet does not reduce noise. At 110 decibels each, these numerous overflights will be intolerable. 5

Furthermore, since the DEIS is funded by the Air National Guard, it refuses to investigate an important question: is all this training in low-level flying needed as part of our vital national defense? The answer is <u>no</u>. It's <u>not</u> needed. It is <u>militarily obsolete</u>. Recent wartime experience, particularly that of the British in the Gulf War, has proven that low-level flying won't work against up-to-date defense weapons and long range missiles. 6

So there's no excuse at all for ruining the lives and livelihoods of thousands of Americans by destroying the peace and quiet in this beautiful valley and inevitably with it the peaceful environment of the adjacent Sangré de Cristo National Wilderness Area. It's shocking that our own military is at war against us. 7

The bottom line: the CAI must eliminate Airburst MOA, LaVeta MOA and all Military Training Routes leading to the Airburst Range. 8

Very truly yours,

Jane Augustine

(Dr.) Jane Augustine

cc: CCAA, Gov. Romer, FAA, Sens. Brown and Campbell, Rep. McInnis, Interior Secty Babbitt, Pres. Clinton, Vice-Pres. Gore

RESPONSES TO COMMENTS

Response to Comment No.1

Many citizens have expressed concern that their quality of life, which is based directly on the kind of lifestyle that they can enjoy while residing in or visiting the State of Colorado, will be changed by implementation of the CAI. The U.S. Air Force, including the ANG, has been conducting military aircraft operations in the Wet Mountain Valley and the San Luis Valley areas where people are most concerned for approximately 25 years. Most of the military airspace proposed under any of the alternatives is currently in use. Commercial aircraft overflights have also been taking place and will continue to do so. Citizens may notice changes in military aircraft overflights in certain areas associated with the CAI. The number of sorties are proposed to increase moderately in portions of the study area and decrease in others. Overall sorties will be reduced from 5,441 to 4,909 under the Preferred Alternative. The bottom altitudes of several airspaces where citizens are most concerned have been raised to reduce noise levels. Therefore, existing quality of life should not be changed.

Response to Comment No.2

The role of tourism in the local economy, and its impact from the alternatives associated with the CAI, have been studied in the EIS as a part of the evaluation of socioeconomic impacts. There are a number of factors, other than aircraft operations, that may affect tourism and the use of recreational areas, including weather, the proximity of other attractions in the area, and the economy. While it is possible that a tourist visiting an area may find an aircraft overflight to be annoying, no significant change to the tourist industry would be expected considering the fact that the majority of the CAI airspace has existed for many years and the relevant influences from military aircraft operations are not changing in the study area. The contribution of tourism earnings to total industry earnings was presented in the EIS for each airspace. In all instances, these values were very consistent with overall state levels of tourism earnings as compared to industry earnings.

Response to Comment No.3

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

Response to Comment No.4

The approach used in the EIS has been modified. The Federal Interagency Committee on Noise (FICON), representing a variety of Federal agencies with a mix of concerns associated with aircraft noise, reviewed aircraft noise analyses issues in 1992. This committee's report (FICON 1992) continued an approach to evaluating relative impacts associated with aircraft noise that has been recognized by noise analysis experts as the most widely endorsed and comprehensive approach to aircraft noise analysis available. This approach to noise analysis was incorporated into the analyses associated with the Draft EIS. In general, Federal land use compatibility criteria are derivatives of guidelines first devised for land near airports. All land use compatibility is based on the use of Day-Night Average Sound Level (abbreviated as DNL or Ldn) as the descriptor representing community noise environments. The criteria treat areas below DNL 65 dB as compatible for all uses, including residential, and they treat DNL 65 dB as a threshold for significant exposure. There is no generally accepted method for treating rural areas differently for these purposes.

However, many EIS reviewers, including some members of the Federal regulatory community, felt the application of the FICON standards, and the 65 dB threshold, to a rural setting was inappropriate for such areas with more quiet ambient noise conditions. Consequently, the use of the 65 dB threshold as the sole means to assess relative impacts or the acceptability of noise levels associated with aircraft operations addressed in the EIS has been modified and the analysis now includes additional information to evaluate potential impacts.

Response to Comment No.5

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Response to Comment No.6

Low-altitude flights allow pilots to learn to avoid detection and to survive in combat. Low-altitude flying provides a significant operational procedure through which detection can be minimized. Training is essential to acquire the skill to use this procedure. Specific combat conditions that allowed high-altitude operations in the Gulf War may not exist in future conflicts. The need for this training is required by Air Force training regulations.

Response to Comment No.7

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.8

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

SHIPPED MAY 1 8 1996

LETTER TO EDITOR

I had the pleasure Tuesday night, May 14th of attending the Draft Enviromental Impact program sponsored by the Colorado Air National Guard. Based on my past experiences with being around other areas of the country where these type flights were conducted I had made plans to speak on behalf of the Air National Guard. However, after hearing the griipes, complaints, what ifs, just imagines and bellacheing from the opposition, I saw no need to respond. The majority of the reasons expressed for not conducting these flights were rediculous to say the least. I was'nt aware that we had citizens in this valley with the aparent lack of mentality to come up with some of these statements. If these remarks express the attitudes of the majority of the citizens of this area, our National defense is in deep trouble. I really feel however that the attitudes of most valley residents is totally opposite.

A proposed flight route for Air Force or Navy training missions is liken to a new prison, juvenile facility, sewer plant or low rent housing project. Everyone admits that they're necessary but no one wants them in their neighborhood of next door. No matter what area of Colorado you mention for these flights, there's always a Gadner, Crestone, Silver Cliff, Mosca or Hooper where a certain amount of the selfish, isolationist, enviromentalist and nature lovers will complain, gripe and bellache and wish the headaches, however large or small they might be, onto somebody else. "Just don't mess with my little corner of the world".

I grew up in south Texas just seven miles from Moore AFB which was one of only three or four all weather training bases in the entire United States. These training flights took place twenty fours a day, twelve months out of the year. Some of the largest ranches in the world including the million acre King ranch were used by these Air Force pilots and pilots from the Naval training base at Kingsville and Corpus Christi. To my knowledge, none of these ranchers ever had a problem with the noise affecting their cattle and if they did, they certainly did'nt gripe or complain about it. This area was also one of the most populated areas, and still is, of deer, javalinas, whooping and sandhill cranes, ducks and geese in the United States and they all got along just fine. No poor little birds got sucked through any of these jets as one speaker implied would happen. It amazes me how now days the comdort and welfare of a bird, rat or skunk takes precedenc over the security of this nation. While hunting deer in these areas I noticed that when one of these planes made a pass, none of the animals even paid attention but went on about their business at hand. So much for the idea of scaring a poor deer, elk or antelope into having a heart attack or stroke.

I also lived for aver a year in Kirkland, Arizona where daily flights of F14s, F15s and F16s took place on a daily basis and the enviromental and wildlife impact was exactly the same. No bellacheing ranchers and no heart attacts by cows, horses, deer and elk. Even after several years of these flights, I noticed that the locals would stop and look up everytime one of these planes passed. I truly feel it was out of curiousity and amazement and not out of fright or wondering if a bomb would accidently be dropped. These planes dont carry weapons as everything is simulated.

I really don't view the complaints concerning livestock or wildlife as a legidimate issue. These training flights are a necessity and if not the San Luis Valley, then where? We don't have a death valley here in Colorado for these pilots and even if we did, you'd have enviromental wacos complaining about the mental affect it would have on poor rattlesnakes, scorpions or Gila monsters. Just imagine the

1

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RESPONSES TO COMMENTS

Response to Comment No. 1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

076L Don Newkirk

trauma a poor rock or tree suffers when an F16 zooms 300 feet overhead. HOw sad!!

Maybe my reasons for wanting to see these beautiful symbols of freedom and security flying through this valley is because I spent four years of my life in the Air Force defending our way of life and I love the sight of these beautiful planes. I get a big tingling sensation up my spine everytime one of these birds flies over at 500 mph or more. As a child growing up I got that same thrill and excitement unlike as one speaker remarked that it would scare the dickens our of all the local children. I can just imagine the horrow stories these kids are being told by their parents concerning these military planes. The high I got from watching these planes certainly beat smoking pot but not inhaling it. I don't know how many other citizens of this valley feel as I do but personally I can't wait for these flights to commence. I plan on spending alot of my spare time in the future in these flight areas just watching these beautiful birds. Bird watching may just become a big past time in my future.

Don Newkirk
Monte Vista, Colo.

852-5952

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LETTER TO Valley Courier FRIDAY MAY 17 th

Christina Cacic / Peter Paulmann

5126 Williams Fork Trail #209
Boulder, CO 80301
(303) 530-4551
Fax: (303) 530-0983

May 19, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

Dear Sir/Madam:

Please DO NOT have the Air National Guard use south central Colorado as a playground for fighter jocks and their new war toys. I am a hang glider pilot, and I also enjoy flying. I do not want to become a hood ornament to one of the F-16 fighter planes.] 1

We bought property in Westcliffe because of the beauty and quiet way of life. We don't want to have that ruined with loud planes flying overhead or in the close vicinity.] 2
What about the adverse effect on wildlife, the risk of crashed and forest fires, loss of property values, destruction of our economy and quality of life, detrimental environmental effects, and the noise pollution. We do not want to see this beautiful place destroyed.] 3, 4, 5, 6

PLEASE STOP THE PLANES FROM FLYING IN SOUTH CENTRAL COLORADO BEFORE IT STARTS. Eliminate the Airburst MOA, LeVeta MOA and all MTRs leading to the Airburst Range.] 7

Sincerely,

Christina Cacic Peter Paulmann

Christina Cacic and Peter Paulmann

cc: Custer County Action Association
Governor Roy Romer
Senator Hank Brown
Congressman Scott McInnis
Senator Ben Nighthorse Campbell

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RESPONSES TO COMMENTS

Response to Comment No.1

On-going education and awareness programs make military and civilian pilots aware of each other's operations. Safe separation procedures can be devised through coordination with the 140 WG to prevent any conflicts among their respective activities. Visual flight rules add further safeguards for elimination of potential conflicts with hang gliders and hot air balloonists.

Response to Comment No.2

There would be some changes in sortie numbers, noise levels, and airspace dimensions under the Original Proposal and the Preferred Alternative addressed in the EIS. However, overall flying hours of the 140 WG will be reduced from 5005 hours to 4600 hours. When compared to existing military aircraft training in the study area, these changes would not change the current levels of solitude and peace and quiet experienced by residents. As under current conditions, noise from military aircraft operations may periodically disturb citizens and affect their enjoyment of solitude; however, opportunities for abundant periods of total peace and quiet would continue as under present conditions.

Response to Comment No.3

Studies conducted on wildlife have shown that numerous wildlife species have the ability to adapt to the presence of man and various man-made sound sources, including jet aircraft noise. While the noise generated from low-altitude military overflights may be initially startling, habituation to jet aircraft noise occurs with most wildlife species. Species-specific responses to low-altitude overflights vary considerably, and responses from individual animals may have the potential to cause injury. However, wildlife populations are usually affected only when a variety of factors work in combination to impact them, including declines or fluctuations in the availability of a food source, habitat destruction or alteration, predation, hunting, trapping, poaching, disease, or inclement weather, rather than noise alone. Normally, it would be unrealistic to predict or attribute any wildlife population declines to a single stressor, such as noise. In addition, no published scientific evidence was identified that indicated harm may occur to wildlife as a result of exposure to the levels of noise generated by military aircraft that would utilize the airspace associated with the Colorado Airspace Initiative.

RESPONSES TO COMMENTS

Response to Comment No.4

In order to address concerns regarding possible devaluation of real estate, the EIS evaluated historical data for property values. This analysis compares counties within the study area for the CAI, including those areas with currently utilized military airspace, to counties outside the study area. The results indicate that all counties experienced increases in property values. Further, in terms of median property values, counties within the study area for the CAI increased 99.71 percent compared to counties outside the study area, which increased 57.74 percent. Whereas a report published by the Federal Aviation Administration concludes "that noise has been shown to decrease the value of property by only a small amount--approximately 1 percent decrease per decibel (DNL)," this analysis applies to airport/airfield environments and not land areas underlying military training airspace. Therefore, although it is not possible to absolutely conclude that counties experiencing military aircraft overflights incur any greater change in real estate values than counties not experiencing similar overflight activity, it is not likely that real estate values would drop as a result of the CAI.

Response to Comment No.5

Many citizens have expressed concern that their quality of life, which is based directly on the kind of lifestyle that they can enjoy while residing in or visiting the State of Colorado, will be changed by implementation of the CAI. The U.S. Air Force, including the ANG, has been conducting military aircraft operations in the Wet Mountain Valley and the San Luis Valley areas where people are most concerned for approximately 25 years. Most of the military airspace proposed under any of the alternatives is currently in use. Commercial aircraft overflights have also been taking place and will continue to do so. Citizens may notice changes in military aircraft overflights in certain areas associated with the CAI. The number of sorties are proposed to increase moderately in portions of the study area and decrease in others. Overall sorties will be reduced from 5,441 to 4,909 under the Preferred Alternative. The bottom altitudes of several airspaces where citizens are most concerned have been raised to reduce noise levels. Therefore, existing quality of life should not be changed.

Response to Comment No.6

Noise from aircraft operations contributes to the overall noise burden on the environment generally referred to as "noise pollution." Military aircraft operations contribute to this burden. Widely accepted means to measure and judge the severity of "noise pollution" do not exist; however, the means to measure or model noise levels does exist. This EIS provides an evaluation of the noise levels associated with military aircraft operations. These levels, when combined with other sources of noise within the environment, contribute to "noise pollution."

Response to Comment No.7

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

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MAY 19, 1996

JOE MICHALAK

363 E COPPER AVE, GENERAL DELIVERY

CRESTONE, CO 81131

AIR NATIONAL GUARD READINESS CTR CAI, EIS

ANDREWS AIR FORCE BASE, MD.

DEAR PROGRAM MANAGER,

I AM WRITING TO DEMAND THE ELIMINATION OF VR 413 IN THE SAN LUIS VALLEY AND THAT THE PROPOSED ALTERNATIVE DEVELOPED BY COLORADO AIRSPACE INITIATIVE BE FORMALLY ANALYZED AS A VIABLE ALTERNATIVE 1

I AM OUTRAGED TO FIND THE CONCLUSION OF "NO SIGNIFICANT IMPACT" FROM A STUDY THAT COST MILLIONS IN PUBLIC FUNDS WHEN THE ACTIVITIES OF THESE PLANES MAKE LIFE IN THE VALLEY NEARLY UNBEARABLE FOR RESIDENTS.

YOUR ORGANIZATION MAY NOT BE ABLE TO COMPREHEND THE PHSYCOLOGICAL AND EMOTIONAL IMPACT OF AN F-16 DOING ACROBATICS IN WHAT WOULD OTHERWISE BE A VERY QUIET ENVIRONMENT, WITHOUT EXPERIENCING IT PERSONALLY. 2

PLEASE DON'T MAKE THE ASSUMPTION THAT I HAVE A LOW TOLERANCE FOR NOISE. I WORK AS A CONTRACTOR/BUILDER

RESPONSES TO COMMENTS

Response to Comment No.1

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

Response to Comment No.2

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.3

The recommendations from the Working Group, presented in Appendix F, were used to develop the Preferred Alternative. Many of the airspace recommendations included in the Working Group Alternative were incorporated verbatim into the Preferred Alternative and significant portions of the other recommendations also were adopted into the alternative. As such, these recommendations are consequently evaluated in the EIS. The airspace configuration components not adopted were only eliminated after air traffic or environmental conflicts were identified that made their inclusion not feasible. The proposed configuration of military airspace and the route structure were then coordinated with Federal Aviation Administration representatives and is based on its ability to meet existing U.S. Air Force training requirements. The configuration of military airspace for the alternatives considered, including the Preferred Alternative, was derived in part by available unobligated airspace and was designed to avoid airports, instrument approaches, major airways, and known environmentally sensitive areas. The Working Group Alternative has played a very prominent role in the formation of the Preferred Alternative addressed in the EIS.

Response to Comment No.4

All comments received during the scoping process associated with this EIS were considered in the preparation of the document. Such comments, as they relate to the proposal, have helped to improve the EIS process and have become a part of the administrative record for the proposal.

AND CAN ACCOMMODATE POWER TOOLS AND EQUIPMENT ON A DAILY BASIS. We moved here 2 yrs ago from a busy Front Range city and are used to urban noise. Please believe my sincerity when I describe the violent noise and behavior of the military practice flights as a nerve-shattering experience. It lasts long after the plane leaves the area.

I want to know why all the good work of the CAI working committee was basically disregarded. 3

It appears the concerns of Roy Romer, Wayne Allard, Scott McInnis, the data of local experts and strong local opposition has all been disregarded. Why wasn't Moffat Co included as a location for a second public hearing when there was such a strong turnout the first time? 4 5

It is obvious that the work in this DEIS is not objective, scientific or legitimate to serve the purpose intended. The people involved in this behavior are doing themselves and this country a disservice because it only contributes to undermine the notion of American democracy and your credibility with the population. People are not as stupid as the supporters of this document suppose. 6

I demand a revised, legitimate and truthful study to assess the impact of military aircraft training in the San Luis Valley. Thank you for your time and attention. 7

Sincerely Joseph H. Michalak

RESPONSES TO COMMENTS

Response to Comment No.5

The hearing locations were selected to ensure the inclusion of a wide geographic representation of potentially interested parties within the affected areas to ensure maximum participation. The availability of meeting rooms with the requisite facilities, that could be reserved on the dates required, also was a significant factor in the selection process. Input from the Citizens Working Group and its members was also considered. These factors were considered more significant than selecting a site primarily on the basis that it might be directly under an airspace.

Response to Comment No.6

The research completed to support the preparation of the CAI EIS follows the use of various accepted scientific methodologies used to analyze pertinent potential impacts. These analyses have been prepared by qualified scientists and engineers who perform these services for a variety of customers, including the ANG.

Response to Comment No.7

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Brauchli – Snyder, P.C.
1401 Walnut, Suite 400
Boulder, CO 80302
(303) 443-1118
Fax: (303) 443-1335

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Paul Snyder, Jr.
Brauchli – Snyder, P.C.
1401 Walnut, Suite 400
Boulder, CO 80302

May 19, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

RE: COLORADO AIRSPACE INITIATIVE

Dear People:

As a Custer County property owner, I adamantly oppose the Airburst MOA, the LaVeta MOA and all MTRs leading to the Airburst Range. } 1

The drat EIS contains serious flaws, the most important of which is its assessment of noise impacts. Quiet is as much a part of the Wet Mountain Valley as its magnificent vistas. To assume noise can be measured by averages seriously misses the point of the real impact on the environment caused by over-the-valley flights. } 2

Please analyze the real environmental impacts using methods which bear a relationship to reality. } 3

Sincerely,

Paul Snyder, Jr.

cc: Custer County Action Association
Governor Roy Romer
Senator Hank Brown
Senator Ben Nighthorse Campbell
Congressman Scott McInnis

RESPONSES TO COMMENTS

Response to Comment No.1

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

Response to Comment No.2

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

Response to Comment No.3

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

20 May 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

Reference: Colorado Airspace Initiative-Draft Environmental Impact Statement

As residents of Custer County we strongly object to the proposed Airburst MOA, LaVeta MOA and all MTRs leading to the Airburst Range.

We were drawn to this Valley mainly because of its tranquil and serene qualities together with its undisturbed natural beauty. The Colorado Airspace Initiative will not only destroy these qualities but will also have an adverse effect on wildlife, property values and the economy. It will also expand the risk of crashes and forest fires. } 1, 2, 3, 4

We have on several occasions personally experienced a very disturbing sample of what to expect if the Colorado Airspace Initiative is forced on us. The incidents we experienced occurred while relaxing outside our home in the Valley. We live up against the East side of the Sangre de Cristo Range and from time to time military aircraft would suddenly and unexpectedly shoot over the top of the mountain. The sudden surprise and thunderous noise would literally break the existing serenity and scare the hell out of us. The aircraft would fly so low that we could easily discern the pilots head in the cockpit. These incidents were probably associated with oil burner routes.

In view of the overwhelming local opposition to the proposed Colorado Airspace Initiative we strongly urge you to consider alternative proposals to satisfy your training objectives. } 5

Sincerely,

I. & M. Cantor

I & M Cantor
P.O. Box 22
Silver Cliff, Co 81249

Copies to:
Custer County Action Ass.
P.O. Box 552
Westcliffe, Co 81252

Governor Roy Romer
136 State Capital Bldg.
Denver, Co. 80203-1792

Senator Hank Brown
716 Hart Senate Office Bldg.
Washington, DC 20510

Senator Ben Nighthorse Campbell
3880 Russell Senate Office Bldg
Washington, DC 20510

Congressman Scott McInnis
512 Cannon Office Bldg.
Washington, DC 20515-0603

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RESPONSES TO COMMENTS

Response to Comment No.1

There would be some changes in sortie numbers, noise levels, and airspace dimensions under the Original Proposal and the Preferred Alternative addressed in the EIS. However, overall flying hours of the 140 WG will be reduced from 5005 hours to 4600 hours. When compared to existing military aircraft training in the study area, these changes would not change the current levels of solitude and peace and quiet experienced by residents. As under current conditions, noise from military aircraft operations may periodically disturb citizens and affect their enjoyment of solitude; however, opportunities for abundant periods of total peace and quiet would continue as under present conditions.

Response to Comment No.2

Studies conducted on wildlife have shown that numerous wildlife species have the ability to adapt to the presence of man and various man-made sound sources, including jet aircraft noise. While the noise generated from low-altitude military overflights may be initially startling, habituation to jet aircraft noise occurs with most wildlife species. Species-specific responses to low-altitude overflights vary considerably, and responses from individual animals may have the potential to cause injury. However, wildlife populations are usually affected only when a variety of factors work in combination to impact them, including declines or fluctuations in the availability of a food source, habitat destruction or alteration, predation, hunting, trapping, poaching, disease, or inclement weather, rather than noise alone. Normally, it would be unrealistic to predict or attribute any wildlife population declines to a single stressor, such as noise. In addition, no published scientific evidence was identified that indicated harm may occur to wildlife as a result of exposure to the levels of noise generated by military aircraft that would utilize the airspace associated with the Colorado Airspace Initiative.

Response to Comment No.3

In order to address concerns regarding possible devaluation of real estate, the EIS evaluated historical data for property values. This analysis compares counties within the study area for the CAI, including those areas with currently utilized military airspace, to counties outside the study area. The results indicate that all counties experienced increases in property values. Further, in terms of median property values, counties within the study area for the CAI increased 99.71 percent compared to counties outside the study area, which increased 57.74 percent. Whereas a report published by the Federal Aviation Administration concludes "that noise has been shown to decrease the value of property by only a small amount--approximately 1 percent decrease per decibel (DNL)," this analysis applies to airport/airfield environments and not land areas underlying military training airspace. Therefore, although it is not possible to absolutely conclude that counties experiencing military aircraft overflights incur any greater change in real estate values than counties not experiencing similar overflight activity, it is not likely that real estate values would drop as a result of the CAI.

Response to Comment No.4

The fire potential associated with aircraft overflights is generated from the potential for an aircraft crash or the use of flares in training. The EIS evaluated the potential for an aircraft crash resulting from the proposal. This evaluation determined that the likelihood of an aircraft crash would be very low. Therefore, the potential for a fire resulting from an aircraft crash would also be very low. In fact, military accidents have declined in the past decade, as described in the February 1996 report of the General Accounting Office, an organization under the U.S. Congress.

Authorized users of the airspace have proposed the continued use of flares in their training. However, the flares would not be released below 2,000 feet AGL. Once a flare is released, it ignites immediately. The burn time for a flare is approximately 4.0 to 4.5 seconds. In those 4.0 to 4.5 seconds, the flare falls approximately 500 feet. This leaves a safety margin of approximately 1,500 feet to allow for a flare that burns for more than 4.5 seconds to extinguish itself. The 140 WG has no knowledge of any fires being caused by flares released during current training missions by any aircraft utilizing Colorado Airspace Initiative airspace.

Response to Comment No.5

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

SHIPPED MAY 2 0 1996

Program Manager, CAI EIS
ANGRC / CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

NO WAY MOA!

We purchased land in Custer County, Colorado. We came to the valley and really love its defining silence. The area is a national treasure and should not be exploited in anyway! } 1

We do NOT want and insist the elimination of MOA, La Veta MOA, and all MTRs leading to the Airburst Range! We object to the Colorado Airspace Initiative! } 2

We as a nation CAN NOT afford to lose these naturally beautiful areas. There are not many left!! } 3

Sincerely,

Tom Clare Jenny Clare

Jenny and Tom Clare
494 Acorn Drive
Boulder Creek, CA 95006

RESPONSES TO COMMENTS

Response to Comment No.1

There would be some changes in sortie numbers, noise levels, and airspace dimensions under the Original Proposal and the Preferred Alternative addressed in the EIS. However, overall flying hours of the 140 WG will be reduced from 5005 hours to 4600 hours. When compared to existing military aircraft training in the study area, these changes would not change the current levels of solitude and peace and quiet experienced by residents. As under current conditions, noise from military aircraft operations may periodically disturb citizens and affect their enjoyment of solitude; however, opportunities for abundant periods of total peace and quiet would continue as under present conditions.

Response to Comment No.2

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

Response to Comment No.3

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

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1503 Culebra Avenue
Colorado Springs, Colorado 80907
May 20, 1996

Program Manager, CAI EIS
ANGRC\CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

Dear Sir:

We have examined the draft EIS for the Colorado Airspace Initiative, and we are very concerned about the proposed configuration of the LaVeta MOA, the Airburst MOA, and all MTRs leading to the Airburst Range, due to the negative effect that the noise of 3061 annual sorties will have on the underlying area.

Colorado residents and tourists from all over the world go to our mountains to escape the noise and bustle of city life. They seek quiet and solitude in our state and national parks, forests and wilderness areas. Specifically, we are concerned that noise from VR 413 and the LaVeta MOA will impact the Wet Mountains, the Wet Mountain Valley, the Sangre de Cristo Wilderness area, the San Isabel and Rio Grande National Forests. VR413 will also impact the Mueller State Park, the Florissant Fossil Beds National Monument, the San Luis Valley State Wildlife Area and the Great Sand Dunes National Monument. We believe the startle effect of military flyovers is incompatible with mountain recreational uses. 1

As owners of a summer home in Custer County southwest of Westcliffe, we know the value of pristine mountain silence, where according to your own study, the ambient noise level is due only to "insects, wind and creeks." This contrasts greatly with the constant background roar at our city residence. I have used a noise meter to register 65 decibels at certain times from Interstate 25 near our home in Colorado Springs, and 65 decibels is LOUD and distressing to us even for city noise. Yet you have used that urban standard with a Day-Night averaging method over a 24 hour period, as an acceptable level in the totally different milieu of silent mountain wilderness. We are glad you have eliminated VTR 412 from the Wet Mountain Valley, but we are distressed that your patently inappropriate methodology for noise analysis has been used to justify VR413 west and south of us, with 2.8 daily events well above 65 decibels. And the 2.1 daily events above 65 decibels from the LaVeta MOA will gravely affect the Wet Mountains and the valley east and south of us. 2,3 4

In short, your self-serving noise analysis methodology is not acceptable to us. It needs to be totally redefined to consider the impact on mountain silence for the final EIS. We believe 35-40 decibels should be used as the maximum allowable standard for these mountain recreation areas. Needless to say, this would mean the elimination of the aforementioned MTRs and MOAs from the Colorado Airspace Initiative.

We are also concerned that the EIS does not take into account the 160 flights a day from eleven airlines that now go in and out of the new Colorado Springs airport. The restricted airspace over Fort Carson, the Fremont MOA, and the LaVeta MOA will increase the fuel costs of affected airlines. Increased costs will ultimately be passed on to consumers and businesses, negatively impacting the economy of the Pikes Peak region. Your $1,500,000 EIS seems to have totally ignored conflicts with this rapidly expanding airport. 5

Please send us copies of all future publications related to the Colorado Airspace Initiative. We also ask that this letter be made part of the official record.

Yours very truly,

Judith R Finley

Judith R Finley

David D. Finley

David D. Finley

c: Governor Roy Romer
Congressman Scott McInnis
Senators Hank Brown and Ben Nighthorse Campbell

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

The approach used in the EIS has been modified. The Federal Interagency Committee on Noise (FICON), representing a variety of Federal agencies with a mix of concerns associated with aircraft noise, reviewed aircraft noise analyses issues in 1992. This committee's report (FICON 1992) continued an approach to evaluating relative impacts associated with aircraft noise that has been recognized by noise analysis experts as the most widely endorsed and comprehensive approach to aircraft noise analysis available. This approach to noise analysis was incorporated into the analyses associated with the Draft EIS. In general, Federal land use compatibility criteria are derivatives of guidelines first devised for land near airports. All land use compatibility is based on the use of Day-Night Average Sound Level (abbreviated as DNL or Ldn) as the descriptor representing community noise environments. The criteria treat areas below DNL 65 dB as compatible for all uses, including residential, and they treat DNL 65 dB as a threshold for significant exposure. There is no generally accepted method for treating rural areas differently for these purposes.

However, many EIS reviewers, including some members of the Federal regulatory community, felt the application of the FICON standards, and the 65 dB threshold, to a rural setting was inappropriate for such areas with more quiet ambient noise conditions. Consequently, the use of the 65 dB threshold as the sole means to assess relative impacts or the acceptability of noise levels associated with aircraft operations addressed in the EIS has been modified and the analysis now includes additional information to evaluate potential impacts.

Response to Comment No.3

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

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Response to Comment No.4

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.5

Commercial air traffic into and out of the Colorado Springs Airport can traverse the Fort Carson restricted airspace during periods of non use when specifically authorized by the air traffic controlling facility. Pilots can traverse the Fremont and La Veta MOAs anytime without a specific clearance. Pilots operating on a visual flight rules flight plan can call the controlling Air Route Traffic Control Center to determine if any of these MOAs are being used. Military aircraft operating in MOAs are sometimes restricted laterally and/or vertically to accommodate commercial air traffic. Because of these procedures, there would be a negligible impact on commercial air traffic.

Dean Fleming
Director
Libre School
Box 221
Gardner, Colorado 81040

5/20/96

This letter is in reference to the proposed La Veta Moa and the Draft Environmental Impact Statement prepared by the Colorado Air National Guard. As director of the Libre School of Art and the Environment I am extremely concerned about the questionable way the DEIS was prepared and the outrageous conclusion on every point that the war games will have no significant impact. A list has been compiled of over one hundred groups representing thousands of people including agricultural organizations, pilots groups, spiritual centers, wilderness coalitions, economic groups, educational schools, and virtually all of our elected representatives from city, county and state who are all opposed to the La Veta MOA, who all have experienced directly the severely negative impact of the COANG's activities in this area. Yet the Statement totally disregards virtually all of the inhabitants of this sensitive area and cynically mails out to everyone a flyer proclaiming their activities as a "Win-Win Situation". Nothing could be farther from the truth. 1

The military took four years, over one thousand pages of bogus figures and who knows how many millions of tax-payers dollars to prepare the DEIS which came to the conclusion that their over-flights will have no impact. The public has been given sixty days to attempt to digest what took their "experts" and expensive PR groups four years to prepare. Yet in only a few minutes of reading one can see the terrible distortions and omissions used to arrive at their false conclusions. If we are to have a democracy with a true representation of the people then no environmental statement could be made without regard to the valid input of the populace effected. 2 3 4

The COANG has perfectly adequate alternatives to the La Veta MOA including Piñon Canyon which does not require flights over wilderness areas or concentrations of silence-loving civilians. Training has not taken place in the Huerfano Valley in these last two years which indicates that the National Guard is able to adequately train without using this very sensitive area. In the Guard's document "Initiative 2010" it was concluded that the La Veta MOA is too small, environmentally saturated, terrible airspace for maneuvering, and that an area thirty miles southeast of Pueblo would be preferable. 5

We ask that the La Veta MOA be abandoned permanently. If that is not possible we ask that an independent and scientifically correct EIS be compiled which takes into account all of the concerns of the people whose lives would be negatively impacted by living under a war zone. 6

Thank you for your time and consideration.
Sincerely,

Dean Fleming

RESPONSES TO COMMENTS

Response to Comment No.1

Because of the many avenues through which the public has received information on the CAI, including both factual and nonfactual information from various sources, some confusion may exist about the existing airspace and proposed new airspace, particularly for the Wet Mountain Valley and the San Luis Valley. The La Veta MOA is an existing airspace. No changes are proposed for this airspace.

VR-413 is also an existing airspace; however, under the Preferred Alternative, its width would be reduced in size and its eastern boundary moved away from the Sangre de Cristo Mountains. The minimum altitude would be raised from surface level to 500 feet above ground level. VR-412, which is currently a low-altitude route through the Wet Mountain Valley, would be eliminated altogether under the Preferred Alternative, thus eliminating low-altitude training completely from the Wet Mountain Valley. Sorties over the Wet Mountain Valley also are reduced under the Preferred Alternative.

Response to Comment No.2

The Council on Environmental Quality provides guidelines for the preparation of Environmental Impact Statements, and the review of EISs by the public and various government agencies. These guidelines direct agencies to "allow not less than 45 days for comments on draft statements" (Section 1506.10 of these guidelines). The comment period for the CAI Draft EIS officially opened March 29, 1996 with the Notice of Availability published in the Federal Register. The initial mailing of the statement to over 750 addressees was accomplished on March 20, 1996 prior to the NOA. The close of the comment period was initially published as June 5, 1996 (68 days), and then extended to July 12, 1996 (105 days).

Response to Comment No.3

The research completed to support the preparation of the CAI EIS follows the use of various accepted scientific methodologies used to analyze pertinent potential impacts. These analyses have been prepared by qualified scientists and engineers who perform these services for a variety of customers, including the ANG.

Response to Comment No.4

The ANG cares about the people that live near their training areas and how they feel about the activity associated with training. The NEPA process is providing the ANG with an opportunity to hear exactly what the public feels about its proposal before any decisions are made. Every scoping comment and every comment on the Draft EIS sent to the ANG has been read and incorporated into the administrative record for the proposal. Public comments have provided a better picture of what subjects the public wanted addressed in the document and have enabled the ANG to improve the EIS by adding or expanding to discussions in the Final EIS. Examples of added or expanded discussions include human health effects, natural quiet, environmental justice, amongst others.

Response to Comment No.5

Training flights have not ceased in Huerfano County during the last few years. VR-413 and the La Veta MOAs are still in use by the 140 WG.

The Pinon Canyon MOA is not a reasonable alternative to the La Veta MOA because of its limited altitude structure.

Response to Comment No.6

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

COLORADO HORSEMEN'S COUNCIL, INC.

Representing Colorado's Nearly $1 Billion Horse Industry

May 20, 1996

Air National Guard Readiness Center
Program Manger, CAI-EIS
3500 Fetchet Avenue
Andrews AFB MD 20762-5157

RE: Draft EIS Colorado Airspace Initiative

To Whom It Concerns:

The following comments on the Draft EIS are offered by the Colorado Horsemans Council, specifically with regard to the impact of the Airspace Intiative on a portion of the equine industry of Colorado. As representatives of this industry we are concerned that the impacts of the proposed operations will have a significant negative impact on the residents and their livestock, and that this assesment falls short of identifying and assessing the impacts.

Specifically, the impacts of noise on domestic livestock appear to be significantly minimized in the report. Focus is given to exotic or endangered species but, not to domestic livestock. The noise assessment is carefully crafted to present a nominal perspective of supersonic jet aircraft and the immediate impact of their flight. The evaluation in the DEIS regarding the impact to persons or individuals appears to have recieved the same superfical assesment.

The DEIS presents a case regarding the impact to domestic livestock. This suggests the passage of low flying tactical aircraft may present a nominal startle effect but no other impacts should be expected. The document provides a specific analysis of the impacts to buffalo and other recently domesticated livestock but, provides no significant analysis or reports to substantiate the impacts on horses or other more usual livestock. This lack of information and focus concerns COHOCO. A concern voiced throughout this process has been an apparent disregard of the residents of this area and the enterprises they are engaged in for either profit or pleasure. The minimal level of study given to the most affected community seems to be more than an over sight. 1 2

The noise analysis presented is carefully crafted and is undoubtedly scientifically accurate. However, it doesn't appear to be intended to report or reflect many of the serious concerns identified early in the process. To assume that a sound study which establishes a background of relative quiet through analysis and then weight the study of the impact of noise by averaging over a 24 hour period is misleading at best. For an individual without experience or background in understanding the measurement of sound and its impacts to respond to this information is impossible. The average 3

P.O. Box 1125 • Arvada, CO 80001 • (303) 279-4546

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RESPONSES TO COMMENTS

Response to Comment No.1

It is possible that aircraft noise could startle domestic animals, especially young or penned animals, and cause them to injure themselves. However, animals adapt and habituate to various sound sources, including jet aircraft noise. Because the airspaces associated with the CAI are mostly existing airspace that have been utilized for over 25 years, this adaptation and habituation to jet aircraft noise has likely already occurred.

Response to Comment No.2

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

person reading this assessment would assume little to no impact from the aircraft. We believe the assessment misses the mark on this point. A aircraft overflying at 300-500 feet will generate significant immediate sound, at the limits of the pain threshold. The DEIS should be revised to reflect this aspect of the sound/noise issue and a revised assessment completed which focuses on the event not the average.

A similar lack of specificity exists in the DEIS on the impact to humans residing in the area. The residents of the affected routes and MOA's have urged the EIS process and anticipated the results of a fair assessment of the issues. Unfortunately the DEIS falls short of the mark as we have noted it has on the effects on livestock and the clarity of the sound assessments. 4

The Air National Guard is to be commended on its responsiveness to public interest in this issue by the ambitious schedule of public meetings, the longer comment period and the preparation of the DEIS. Unfortunately, the quality of the analysis and it's focus fall short of the mark.

The Colorado Horsemans Council urges the Air National Guard to closely review its assessment of the issues we have identified and revise the DEIS to be comprehensible to the lay person; realistic, specific and context sensitive with respect to the impacts of sound; and provide a responsible and through assessment of the impacts of this proposal on horses and domestic livestock as well as their human counterparts. 5

Sincerely,

Bette Heller

Bette Heller
President,
Colorado Horsemans Council

cc: Governor Romer
Custer County Action Committee

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RESPONSES TO COMMENTS

Response to Comment No.3

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

Response to Comment No.4

An additional discussion of human health effects has been added to Volume I of the EIS and can be found in new Subsection 4.13. This new subsection provides more information than previously given in the Draft EIS in Appendix G of Volume II.

Response to Comment No.5

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

085L Bette Heller

SHIPPED MAY 20 1996

Written Comment Form

ENVIRONMENTAL IMPACT STATEMENT FOR THE COLORADO AIRSPACE INITIATIVE

If you would prefer to submit written comments on the DEIS, please use this form. Continue on the back of the form or attach extra sheets, as necessary. Thank you.

NAME: Mary A. Johnston

TITLE/ORGANIZATION: Private Citizen

ADDRESS: P.O. Box 133 (Street) Crestone CO 81131 (City/State/Zip)

– COMMENTS –

I attended the ANG DEIS meeting at Alamosa CO on May 14, 1996. My comments are as follows:

The meeting was scheduled at Alamosa rather than Moffat as requested which is the site of the projected Air Guard activity. Most of the attendees came down from the Moffat/Crestone area and of course attendance was less than had it been in the proper location. 1

This was not a democratic process. There was no opportunity to ask questions of the military officers in the public arena.

During the citizen comment period the presence of military officers was minimal, most being out in the hall ready to "spill" the one or two present at the hearing. A lack of serious interest in our concerns was obvious. 2

The use of simulators in your war games would be cheaper in human lives and military costs. 3

Where can we get official figures on pilot accidents and fatalities in the military? 4

Who reads our comments? Who makes decisions to act or not upon them? Kindly reply personally. 5

Please hand this form to the staff, drop into the collection box, or mail to:

Program Manager, CAI EIS
Environmental Division
Air National Guard Readiness Center/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

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RESPONSES TO COMMENTS

Response to Comment No.1

The hearing locations were selected to ensure the inclusion of a wide geographic representation of potentially interested parties within the affected areas to ensure maximum participation. The availability of meeting rooms with the requisite facilities, that could be reserved on the dates required, also was a significant factor in the selection process. Input from the Citizens Working Group and its members was also considered. These factors were considered more significant than selecting a site primarily on the basis that it might be directly under an airspace.

Response to Comment No.2

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.3

The use of flight simulators for pilot training is already part of the training program for various aircraft using the affected airspace. The F-16 training regulation (AFI 11-F16) stipulates those activities that may be accomplished using simulators and those requiring actual flying. Although flight simulators work well for certain types of training (e.g., emergency procedures and instrument training), the complete substitution of simulator training for all flight training is not a viable alternative. In addition, the availability of simulators for on-going readiness training is limited and not currently at the 140 WG.

Response to Comment No.4

United States Air Force safety statistics, including aircraft mishaps are archived at Headquarters, Air Force Safety Center, SEF, 9700 Ave. G, Bldg 24499, Kirkland AFB, NM 87117-5671.

Response to Comment No.5

The decisionmaker for this action is the Secretary of the Air Force (currently Ms. Sheila Widnall). She may delegate that authority to one of her deputy secretaries, as often happens in the case of environmental impact statements.

Susan Jones
1110 C Monroe Dr.
Boulder, CO 80303
(303) 442-8635

20 May 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Ave.
Andrews AFB, MD 20762-5157

Dear Mr./Ms. Manager:

I am writing to express my concern regarding the DEIS addressing the proposal to increase low-altitude National Guard training in the San Luis Valley and Wet Mountain Valley in Colorado. The finding of "no significant impact," based on application of urban or airport area noise level standards to a wilderness area (including a wildlife refuge and state and national parks, forests, and monuments as well as official Wilderness areas) flies in the face of all common sense. I consider it an abuse of our environmental impact study guidelines, which will result in devastating abuse of both people and wildlife making use of these areas for peace, solitude, or survival. 1 2

Studies have shown that increased noise interferes with the reproductive behavior of numerous forms of wildlife. From my own personal experience, I can testify to the adverse impact that increased flights has on one's experience of daily living and enjoyment of the outdoors, in light of the change in flight paths due to conversion from Stapleton Airport to DIA. 3 4

I strongly insist on the elimination of Airburst MOA, VR-413, LaVeta MOA, and all MTRs leading to Airburst Range. 5

I would be very grateful to hear from you regarding your thoughts and intentions on this matter.

Sincerely,
Susan L Jones
Susan Jones

cc: Colorado Airspace Alliance
Custer County Action Assn.
P.O. Box 552
Westcliffe, CO 81252

RESPONSES TO COMMENTS

Response to Comment No.1

The approach used in the EIS has been modified. The Federal Interagency Committee on Noise (FICON), representing a variety of Federal agencies with a mix of concerns associated with aircraft noise, reviewed aircraft noise analyses issues in 1992. This committee's report (FICON 1992) continued an approach to evaluating relative impacts associated with aircraft noise that has been recognized by noise analysis experts as the most widely endorsed and comprehensive approach to aircraft noise analysis available. This approach to noise analysis was incorporated into the analyses associated with the Draft EIS. In general, Federal land use compatibility criteria are derivatives of guidelines first devised for land near airports. All land use compatibility is based on the use of Day-Night Average Sound Level (abbreviated as DNL or Ldn) as the descriptor representing community noise environments. The criteria treat areas below DNL 65 dB as compatible for all uses, including residential, and they treat DNL 65 dB as a threshold for significant exposure. There is no generally accepted method for treating rural areas differently for these purposes.

However, many EIS reviewers, including some members of the Federal regulatory community, felt the application of the FICON standards, and the 65 dB threshold, to a rural setting was inappropriate for such areas with more quiet ambient noise conditions. Consequently, the use of the 65 dB threshold as the sole means to assess relative impacts or the acceptability of noise levels associated with aircraft operations addressed in the EIS has been modified and the analysis now includes additional information to evaluate potential impacts.

Response to Comment No.2

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.3

Studies conducted on wildlife have shown that numerous wildlife species have the ability to adapt to the presence of man and various man-made sound sources, including jet aircraft noise. While the noise generated from low-altitude military overflights may be initially startling, habituation to jet aircraft noise occurs with most wildlife species. Species-specific responses to low-altitude overflights vary considerably, and responses from individual animals may have the potential to cause injury. However, wildlife populations are usually affected only when a variety of factors work in combination to impact them, including declines or fluctuations in the availability of a food source, habitat destruction or alteration, predation, hunting, trapping, poaching, disease, or inclement weather, rather than noise alone. Normally, it would be unrealistic to predict or attribute any wildlife population declines to a single stressor, such as noise. In addition, no published scientific evidence was identified that indicated harm may occur to wildlife as a result of exposure to the levels of noise generated by military aircraft that would utilize the airspace associated with the Colorado Airspace Initiative.

Response to Comment No.4

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.5

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

May 20, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

Gentlemen:

As a property owner in the Westcliffe area of Colorado, I have been contacted by a group called the Custer County Action Association asking that I write to your office asking that the ANG eliminate the Airburst MOA, LaVeta MOA and all MTR's leading to the Airburst Range. I am concerned about the effect of the noise level that your training flights may have upon my peaceful property south of Westcliffe.

However, I am more concerned about the readiness of our nations military. When we ask the young sons and daughters of this country to go into harms way in our defense, I want them to be highly trained and ready to do their duty. If the airspace over my property is needed to reach this end, please use it with my good wishes. 1

Sincerely,

Wayne F. Kendall Jr.
18375 Lazy Summer Way
Monument, CO 80132

Copy to: Custer County Action Association
P.O. Box 552
Westcliffe, CO 81252-9902

RESPONSES TO COMMENTS

Response to Comment No. 1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Bill and Dorothy Parker
Music Meadows Ranch
Westcliffe, CO. 81252
May 20, 1996

Harry Knudson
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB,MD 20762-5157

Dear Mr. Knudson:

Re: the proposed Colorado Airspace Initiative, esp. the La Veta MOA and Airburst C

We are landowners in Custer County, with 5,000+ acres, and are very concerned about the proposed La Veta MOA. 1

There is considerable documentation on the effect of low level overflights on livestock. The Schultz curve is used in the DEIS to "prove" that jets flying over us at 165 db will generate no noise. That is idiocy! That study is not compatible with this area. This is an area with no noise, not a large city. We are referring to low level jets, not city traffic. 2

Over the past 30 years we have made a considerable investment in the serene beauty of this area. The proposed overflights would destroy the quality of life here. 3

The increase in the number of overflights from less than one per day to as many as 15 to 40 per day would also have a severe negative impact on property values. Values have been going up in the five years since the Colorado Air National Guard has cut back on the number of sorties over our valley. It has been calculated, based on Air Force data, that we could see a loss of 15% to 30% in property values due to the military "taking" of our airspace. Is the Air National Guard prepared to reimburse us for this loss? 4,5

The Air National Guard does not need our airspace. They have been fulfilling their practice criteria during the past five years with little flying in our area, and are a force we can all be proud. However, we resent the underhanded way the Air National Guard is whitewashing the DEIS, and spending our tax dollars to undermine our interests. 6

Sincerely,

Bill and Dorothy Parker

cc Governor Roy Romer
Paul Gallant
Brigadier General Mason C. Whitney
Custer County Action Association
Senator Hank Brown
Senator Ben Nighthorse Campbell
Congressman Scott McInnis

RESPONSES TO COMMENTS

Response to Comment No.1

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Response to Comment No.2

The approach used in the EIS has been modified. The Federal Interagency Committee on Noise (FICON), representing a variety of Federal agencies with a mix of concerns associated with aircraft noise, reviewed aircraft noise analyses issues in 1992. This committee's report (FICON 1992) continued an approach to evaluating relative impacts associated with aircraft noise that has been recognized by noise analysis experts as the most widely endorsed and comprehensive approach to aircraft noise analysis available. This approach to noise analysis was incorporated into the analyses associated with the Draft EIS. In general, Federal land use compatibility criteria are derivatives of guidelines first devised for land near airports. All land use compatibility is based on the use of Day-Night Average Sound Level (abbreviated as DNL or Ldn) as the descriptor representing community noise environments. The criteria treat areas below DNL 65 dB as compatible for all uses, including residential, and they treat DNL 65 dB as a threshold for significant exposure. There is no generally accepted method for treating rural areas differently for these purposes.

However, many EIS reviewers, including some members of the Federal regulatory community, felt the application of the FICON standards, and the 65 dB threshold, to a rural setting was inappropriate for such areas with more quiet ambient noise conditions. Consequently, the use of the 65 dB threshold as the sole means to assess relative impacts or the acceptability of noise levels associated with aircraft operations addressed in the EIS has been modified and the analysis now includes additional information to evaluate potential impacts.

Response to Comment No.3

Many citizens have expressed concern that their quality of life, which is based directly on the kind of lifestyle that they can enjoy while residing in or visiting the State of Colorado, will be changed by implementation of the CAI. The U.S. Air Force, including the ANG, has been conducting military aircraft operations in the Wet Mountain Valley and the San Luis Valley areas where people are most concerned for approximately 25 years. Most of the military airspace proposed under any of the alternatives is currently in use. Commercial aircraft overflights have also been taking place and will continue to do so. Citizens may notice changes in military aircraft overflights in certain areas associated with the CAI. The number of sorties are proposed to increase moderately in portions of the study area and decrease in others. Overall sorties will be reduced from 5,441 to 4,909 under the Preferred Alternative. The bottom altitudes of several airspaces where citizens are most concerned have been raised to reduce noise levels. Therefore, existing quality of life should not be changed.

Response to Comment No.4

Since 1970, many Colorado counties, including Custer County, have experienced an increase in total population, the number of housing units, property values, and the general local economy. Because many factors contribute to socioeconomic conditions and no absolute link between aircraft overflights and economic changes can be determined, it is not possible to conclude that an increase (or decrease) in building activity is directly attributable to a change in the number of sorties flown. Custer County appears to have experienced growth during periods of high and low aircraft activity levels. A review of socioeconomic conditions across the entire CAI study area does not reveal widespread, repetitive, or consistent patterns. For example, while some counties may have experienced an increase in population, housing, and employment, other counties may have experienced a decrease in these conditions. Additionally, some counties may have experienced a combination of growth in population and housing but a decline in local economic conditions.

Response to Comment No.5

In order to address concerns regarding possible devaluation of real estate, the EIS evaluated historical data for property values. This analysis compares counties within the study area for the CAI, including those areas with currently utilized military airspace, to counties outside the study area. The results indicate that all counties experienced increases in property values. Further, in terms of median property values, counties within the study area for the CAI increased 99.71 percent compared to counties outside the study area, which increased 57.74 percent. Whereas a report published by the Federal Aviation Administration concludes "that noise has been shown to decrease the value of property by only a small amount--approximately 1 percent decrease per decibel (DNL)," this analysis applies to airport/airfield environments and not land areas underlying military training airspace. Therefore, although it is not possible to absolutely conclude that counties experiencing military aircraft overflights incur any greater change in real estate values than counties not experiencing similar overflight activity, it is not likely that real estate values would drop as a result of the CAI.

Response to Comment No.6

Comment noted. Under the Preferred Alternative, all low altitude flights (below 5,000 feet above the ground) will cease in the Wet Mountain Valley.

18 Blackberry Ct.
Westcliffe, Co. 81252
May 20, 1996

Program Manager CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD. 20762-5157

Program Manager;

Once again, as a resident of rural Westcliffe and for the record, I state my opposition to the Colorado Air Initiative proposed by the COANG. My main concerns are danger and noise causing disruption of life in a pristine wild country and detrimental effects on our economy by the daily maneuvers of low altitude flyovers. 1

The volumes printed in the DEIS have been written in such a manner as to discourage the average person from reading it in full and I feel is repetitive and distorted in its entirety. Graphs and charts shown as a result of noise studies are outdated and were carried out in urban settings having no similarity at all to our area. 2

At our last scoping meeting a few years ago in Westcliffe handreds of people came out in alarm and fear, thus voicing their opposition to overflights in the Wet Mountain Valley by the ANG. As a result of this outcry the ANG has decreased its flight numbers to one-third the approved flight numbers over the last few years to deliberately lower citizen awareness. Many people feel there is now no cause for concern. They feel the proposal of the CAI has been cancelled. This is an intended effect desired by the ANG. 3

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RESPONSES TO COMMENTS

Response to Comment No.1

Every effort has been made to make this EIS as understandable as possible, while still providing the appropriate scientific analysis to allow decision makers to make informed decisions. In accordance with guidance from the Council on Environmental Quality, simple summary information is presented in Section 2, details of the impacts are presented in Section 4, and more complex analyses are offered in the appendices. Each reader may choose to read the level of analysis that is appropriate to his or her familiarity with the subject matter.

Response to Comment No.2

Data presented in the EIS include studies of people in rural areas exposed to military aircraft noise, similar to areas associated with the Colorado Airspace Initiative.

Response to Comment No.3

The frequency of training flights that have been observed by the public represent normal operations needed to fulfill USAF training requirements.

Response to Comment No.4

Since 1970, many Colorado counties, including Custer County, have experienced an increase in total population, the number of housing units, property values, and the general local economy. Because many factors contribute to socioeconomic conditions and no absolute link between aircraft overflights and economic changes can be determined, it is not possible to conclude that an increase (or decrease) in building activity is directly attributable to a change in the number of sorties flown. Custer County appears to have experienced growth during periods of high and low aircraft activity levels. A review of socioeconomic conditions across the entire CAI study area does not reveal widespread, repetitive, or consistent patterns. For example, while some counties may have experienced an increase in population, housing, and employment, other counties may have experienced a decrease in these conditions. Additionally, some counties may have experienced a combination of growth in population and housing but a decline in local economic conditions.

The DEIS does not acknowledge the economic boom which has occurred over this period of time of decreased flyovers. Within one mile of our home five houses have been built over the last year. Two families are holding off in fear of the CAI going into effect. 4

The DEIS does not acknowledge that the ANG has established a new condition that should be noted as the No-Action or Existing Baseline for all analysis. This new baseline was not taken into account. Instead, the three times as many flights as were actually flown were used in the analysis. The fact that the ANG decreased its flights during the creation of the DEIS shows its awareness of negative impact due to their actions and actions and proposals. 5

I see, also, a blatant cost shifting from wealthy Denver areas to poor, rural counties. I feel there are much wiser alternatives to using the Wet Mountain Valley as a military practice field. 6

Sincerely,

Marilyn L. Spink

RESPONSES TO COMMENTS

Response to Comment No.5

Flights in the State of Colorado by military aircraft have lessened in the past couple of years due to budget constraints placed by Congress on the Air National Guard and other military users. The flights indicated in the EIS reflect a reasonable scenario, in this instance, the 1993/1994 flying hour program for the 140 WG.

Response to Comment No.6

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Written Comment Form

SHIPPED MAY 20 1996

ENVIRONMENTAL IMPACT STATEMENT FOR THE COLORADO AIRSPACE INITIATIVE

If you would prefer to submit written comments on the DEIS, please use this form. Continue on the back of the form or attach extra sheets, as necessary. Thank you.

NAME: R.A.L. WEST

TITLE/ORGANIZATION:

ADDRESS: P.O. Box 827 (Street) La Veta, Co 81055 (City/State/Zip)

-- COMMENTS --

I AM A TWO-YEAR RESIDENT OF LA VETA, CO, RESIDING WITHIN THE TOWN LIMITS. I WAS SHOCKED AND APPALLED TO DISCOVER VERY LOW AIRPLANE FLIGHTS AND SONIC BOOMS TO BE PART OF LIFE IN WHAT I'D BELIEVED TO BE A PEACEFUL VILLAGE OF EXCEPTIONAL NATURAL BEAUTY. I EVENTUALLY LOCATED A PHONE NUMBER TO CALL AND COMPLAIN ABOUT THESE OVERFLIGHTS. I HAVE NEVER RECEIVED THE LEAST RESPONSE TO, OR ACKNOWLEDGEMENT OF, THESE COMPLAINTS. AS A NEWER RESIDENT OF THE AREA I'm ONLY SLIGHTLY INFORMED ABOUT THE HISTORY OF THESE ANG FLIGHTS. AS SOON AS THE DEIS SUMMARY BECAME AVAILABLE, I CHECKED IT OUT OF OUR LIBRARY AND TRIED TO MAKE SENSE OF IT. 1

My FIRST IMPRESSION WAS THAT IT WAS ALREADY A "DONE DEAL", AND THAT CITIZEN INPUT WAS ONLY A FORMALITY - DISCOURAGING - NONETHELESS I WISH TO BE ON RECORD AS OPPOSING ANY MILITARY, ANG OR OTHER TEST OR TRAINING FLIGHTS OVER THIS AREA. 2

I HAVE DEEP CONCERNS ABOUT THE DAMAGE THESE FROM TO QUALITY OF LIFE FROM HIGH NOISE LEVELS, DAMAGE TO WILDLIFE AND LIVESTOCK DUE TO NOISE AND STARTLING OF THE ANIMALS, DANGER OF CRASHES, DANGER OF FIRE FROM LOW FLYING CRAFT (OF PARTICULAR CONCERN IN THIS DROUGHTY YEAR), DANGER TO LIFE AND PROPERTY FROM INMATURE PILOTS. I DO NOT ACCEPT THAT THESE FLIGHTS ARE FOR MY PROTECTION AND CERTAINLY NOT FOR MY BENEFIT. FROM MY PERSPECTIVE THE WHOLE BUREAUCRACY THIS ISSUE ENTAILS AND ENCOMPASSES, IS ANOTHER 'DINOSAUR' WHICH IT IS STILL REFUSING TO BECOME AWARE THAT IT IS OUTMODED AND OBSOLETE. I AM ANGERED THAT THIS WHOLE SHOW, WHATEVER ANY'S VIEWPOINT IS PAID FOR WITH TAXPAYERS DOLLARS. I HAVE NO DOUBTS THAT AT THIS ADVANCED DATE OF THE 20TH CENTURY THE 'TRAINING' INVOLVED IN THESE FLIGHTS COULD, AND WOULD, BE BETTER SERVED WITH THE VERY HIGHLY SOPHISTICATED SIMULATORS AVAILABLE - WITHOUT JEOPARDIZING THE HEALTH, PEACE OF MIND, ECONOMIES + ECOLOGY OF THIS SACRED NATIONAL REGION. 3

Respectfully, R.A.L. WEST 4

Please hand this form to the staff, drop into the collection box, or mail to:

Program Manager, CAI EIS
Environmental Division
Air National Guard Readiness Center/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

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RESPONSES TO COMMENTS

Response to Comment No.1

Since its inception, the toll-free number (800) 582-8507 has helped the ANG to monitor and reduce the number of aircraft noise complaints. All calls to the number are taken seriously regardless of how the caller characterizes the complaint. If callers are not satisfied with the 800-number service, experience future problems with the toll-free number, or feel they are not getting a timely response, an alternative is to call the 140 WG Commander at (303) 340-9555.

Response to Comment No.2

The ANG cares about the people that live near their training areas and how they feel about the activity associated with training. The NEPA process is providing the ANG with an opportunity to hear exactly what the public feels about its proposal before any decisions are made. Every scoping comment and every comment on the Draft EIS sent to the ANG has been read and incorporated into the administrative record for the proposal. Public comments have provided a better picture of what subjects the public wanted addressed in the document and have enabled the ANG to improve the EIS by adding or expanding to discussions in the Final EIS. Examples of added or expanded discussions include human health effects, natural quiet, environmental justice, amongst others.

Response to Comment No.3

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.4

The use of flight simulators for pilot training is already part of the training program for various aircraft using the affected airspace. The F-16 training regulation (AFI 11-F16) stipulates those activities that may be accomplished using simulators and those requiring actual flying. Although flight simulators work well for certain types of training (e.g., emergency procedures and instrument training), the complete substitution of simulator training for all flight training is not a viable alternative. In addition, the availability of simulators for on-going readiness training is limited and not currently at the 140 WG.

Written Comment Form

ENVIRONMENTAL IMPACT STATEMENT FOR THE COLORADO AIRSPACE INITIATIVE

If you would prefer to submit written comments on the DEIS, please use this form. Continue on the back of the form or attach extra sheets, as necessary. Thank you.

NAME: John R. Whitley and Yvette Whitley

TITLE/ORGANIZATION: outraged citizens and taxpayers

ADDRESS: 1549 County Road 17, Gunnison, CO 81230
(Street) (City/State/Zip)

– COMMENTS –

Dear Staff, 1350hrs 5/20/96

The proposed M.O.A. in the San Luis Valley of Colorado is unnecessary and would destroy the quality of life and habitat for most all inhabitants and visitors. 1

Having visited the area often while living near as it for 35 years I can say this proposal is ridiculous and outrageous. 2

On a recent weekend hang gliding with friends near Blanca Peak the A.N.G. was notified that gliding would occur at this location. This brought several of your copters in on us at very low and close locations for a very dangerous situation. Government — Military bungling at its usual worst. 3

Ft. Irwin, Carson, Juniper Canyon, etc. is enough training area. Less is more! When will you guys listen to the citizens you work for?? 4

Truly,
John & Yvette
Whitley
Gunnison, CO

Please hand this form to the staff, drop into the collection box, or mail to:

Program Manager, CAI EIS
Environmental Division
Air National Guard Readiness Center/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

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RESPONSES TO COMMENTS

Response to Comment No.1

Many citizens have expressed concern that their quality of life, which is based directly on the kind of lifestyle that they can enjoy while residing in or visiting the State of Colorado, will be changed by implementation of the CAI. The U.S. Air Force, including the ANG, has been conducting military aircraft operations in the Wet Mountain Valley and the San Luis Valley areas where people are most concerned for approximately 25 years. Most of the military airspace proposed under any of the alternatives is currently in use. Commercial aircraft overflights have also been taking place and will continue to do so. Citizens may notice changes in military aircraft overflights in certain areas associated with the CAI. The number of sorties are proposed to increase moderately in portions of the study area and decrease in others. Overall sorties will be reduced from 5,441 to 4,909 under the Preferred Alternative. The bottom altitudes of several airspaces where citizens are most concerned have been raised to reduce noise levels. Therefore, existing quality of life should not be changed.

Response to Comment No.2

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.3

On-going education and awareness programs make military and civilian pilots aware of each other's operations. Safe separation procedures can be devised through coordination with the 140 WG to prevent any conflicts among their respective activities. Visual flight rules add further safeguards for elimination of potential conflicts with hang gliders and hot air balloonists.

Response to Comment No.4

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

May 20, 1996

Program Manager CAIEIS
ANGRC/CEVP
3500 Fetchet Ave.
Andrews AFB, MD 20762-5157

Dear Responsible Officers:

Your Draft Environmental Impact Statement for the proposed expansion of the Airburst and LaVeta MOAS is flawed, opportunistic and dishonest in style, method and motivation. 1

How can you claim that 5000 sorties, low altitude combat training, toxic emissions and decibel levels exceeding 130 dB's will have "No significant impact" on the environment and the citizenry of our the area below the flight patterns.

Your claim is irresponsible, poorly conceived and inappropriate. More importantly it is not necessary. I am a veteran of the Air Corps World War II. If this is what the National Guard proposes as defenders of our land and rights the organization should be deactivated. If not that the officers proposing such a plan should be investigated. You already have sufficient space for any training necessary. This new grab for training area is as selfish and self-serving as your methodology in supporting your proposal. 2

During the "test period" to determine the noise intrusion of the current flights apparently the number of sorties through the area were reduced. Was this to reduce the outcry of the citizenry? Any manipulation of this sort can be discovered through a study of the flight schedules. If true those responsible will be investigated. 3

If you persist in the pursuit of this folly ,successfully or not. I shall do all in my power to rally others to bring to the attention of the highest in authority your bad research and flawed data.

The honored name of the National Guard should not be so poorly used by your current leadership.

Many of us that live in the Wet Mountain Valley and environs wonder how you would feel if hundreds of motor-bikers decided that the street in front of your homes would be a marvelous place to check out their high powered bikes with and without mufflers. And maybe a few would loose control and put your family or property in jeopardy. 4

Sincerely,

Arthur L. Zapel

Choctaw Trail, Cuerno Verde
Westcliffe, Co. 81252

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RESPONSES TO COMMENTS

Response to Comment No.1

Because of the many avenues through which the public has received information on the CAI, including both factual and nonfactual information from various sources, some confusion may exist about the existing airspace and proposed new airspace, particularly for the Wet Mountain Valley and the San Luis Valley. The La Veta MOA is an existing airspace. No changes are proposed for this airspace.

VR-413 is also an existing airspace; however, under the Preferred Alternative, its width would be reduced in size and its eastern boundary moved away from the Sangre de Cristo Mountains. The minimum altitude would be raised from surface level to 500 feet above ground level. VR-412, which is currently a low-altitude route through the Wet Mountain Valley, would be eliminated altogether under the Preferred Alternative, thus eliminating low-altitude training completely from the Wet Mountain Valley. Sorties over the Wet Mountain Valley also are reduced under the Preferred Alternative.

Response to Comment No.2

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.3

The frequency of training flights that have been observed by the public represent normal operations needed to fulfill USAF training requirements.

Response to Comment No.4

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

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Written Comment Form

MAY 21 1996

ENVIRONMENTAL IMPACT STATEMENT FOR THE COLORADO AIRSPACE INITIATIVE

If you would prefer to submit written comments on the DEIS, please use this form. Continue on the back of the form or attach extra sheets, as necessary. Thank you.

NAME: Jim BAKER

TITLE/ORGANIZATION: WESTCLIFFE PROPERTIES, INC

ADDRESS: 301 MAIN ST. (Street) WESTCLIFFE, CO. 81252 (City/State/Zip)

– COMMENTS –

TO: AIR NATIONAL GUARD
RE: COLORADO AIRSPACE INIATIVE

I WANT TO TAKE TIME TO VOICE THE STRONGEST OPPOSITION TO THE PROPOSED MOA's/MTR's OVER THE WESTCLIFFE, WET MOUNTAIN VALLEY AREA. THE IMPACT OF THIS TYPE OF ACTIVITY IN SUCH A CLOSED AREA WOULD RESULT IN SEVERE REDUCTION IN ENVIRONAL QUALITY OVERALL AND HAVE AN EXTREME ADVERSE EFFECT ON WILDLIFE AND HUMAN ENJOYMENT. THE WET MTN VALLEY IS ONE OF THE FEW REMAINING PRESTINE & ENVIRONMENTALLY HIGH QUALITY HABITATS LEFT IN OUR COUNTRY. 1

CURRENT WORLD MILITARY REQUIREMENTS MAKE THIS TYPE OF ACTIVITY IN AREAS OF THIS QUALITY COMPLETELY UNWARRANTED. OTHER REMOTE AREAS WOULD BE MORE ACCEPTABLE. 2

Use opportunity to strongly oppose MOA's/MTR's

Sincerely, Jim Baker
5/17/96

Please hand this form to the staff, drop into the collection box, or mail to:

Program Manager, CAI EIS
Environmental Division
Air National Guard Readiness Center/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

The use of other training areas was examined as part of the development of the alternatives studied in detail in the EIS in Subsection 2.3. The proposal was designed to minimize conflicts with potentially sensitive areas while providing the training resources necessary to meet military readiness requirements. Specific narrowing criteria for the selection of military training airspace (see Subsection 2.3.3 in Volume I) were used to evaluate other locations, and no alternative training areas were identified that could be substituted for the airspace configuration proposed in the alternatives studied in the EIS.

The primary user of the airspace included in the Colorado Airspace Initiative is the 140 WG based at Buckley Air National Guard Base in Aurora, Colorado. Because of limited resources and aeronautical constraints, virtually all of our nation's fighter units train in airspace that is within a "tank of gas" of the aircrews' base.

Dwight Bishop — **Acoustical Consultant**

2385 Cartegena Way
Oceanside, CA 92056

(619) 722-7602

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

SUBJECT: Comments on the Draft Environmental Impact Statement for the Colorado Airspace Initiative (DEB Project 96011)

DATE: May 21, 1996

Dear Program Manager, CAI EIS:

This letter summarizes my technical assessment of the noise analyses and noise impact information provided in the draft environmental impact statement (DEIS) for the Colorado Airspace Initiative[1]. Emphasis has been placed on the technical accuracy and completeness of the noise analyses and the information provided for assessing noise impacts.

A summary of my qualifications for making this technical assessment is given in Attachment 1 to this letter.

My comments are as follows:

1.0 CALCULATION OF DAY NIGHT LEVELS

1.1 Numbers of Sorties

The Day Night Level (DNL) metric is used in the DEIS to describe the noise environment for both the existing and proposed operations. The magnitude of the DNL is influenced by both the number of noise events as well as the magnitude of the events. It is not clear that the number os sorties used in the DEIS for computing the existing baseline is based upon the actual historical level of operations or is upon the maximum "allowed " numbers of sorties (as estimated from earlier environmental statements, for example).

In baseline calculations, if the calculated DNL is not based upon the actual number of sorties, but is based upon a much larger "allowed" number of sorties, the calculated baseline DNL will be inflated, thus underestimating the magnitude of the expected change in the noise environment.

1

[1]Air National Guard, National Guard Bureau, "Draft Environmental Impact Statement for the Colorado Airspace Initiative", March 1996.

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RESPONSES TO COMMENTS

Response to Comment No.1

The baseline sortie numbers, published in the Draft EIS for the No-Action Alternative, are representative of typical annual use of the La Veta MOA. For example, annual usage for La Veta MOA for 1994 was 985 sorties and in 1995 was 994 sorties. The low utilization from 1991 to 1993 was due to the 140 WG conversion from the A-7 to the F-16 aircraft.

Response to Comment No.2

MRNMAP is documented in the report by Lucas and Calamia (1994) cited in the text. This report has been publicly available.

Response to Comment No.3

MRNMAP models flight distributions in several ways, so as to properly represent airspace usage. The model accounts for concentrations of flights at entry and exit corridors.

Response to Comment No.4

The correct maximum onset rate penalty is 11 dB. That value was used in all analyses. The 5 dB stated in Appendix G is been corrected in the Final EIS.

The Air National Guard (ANG) should describe the basis for the numbers of sorties used in the baseline calculations, and redo calculations of the baseline levels in the event that actual numbers of sorties were not used in the original calculations.

1.2 Uniform Distribution of Sorties in Military Operations Areas

As noted in Section 3.1.4 of the DEIS, a relatively new USAF computer program, MRNMAP, was used to estimate DNL values in military operations areas (MOAs). As noted in Section 3.1.4.1, this program evidently simulates a uniform distribution of sorties within a MOA in calculating DNL values for the MOA.

In contrast to the USAF MTR and NOISEMAP computer programs which are well documented, no publicly available documentation (in the form of technical reports) is currently available for the MRNMAP program, hence it is not possible to determine how DNL values were calculated within the MOAs nor to review the assumptions used in calculating the DNL values. Thus, the technical reasonableness or accuracy of the calculations cannot be assessed.

Further, the assumption of a uniform distribution of flights within a MOA is questionable. Most MOAs have defined entry and exit corridors that result in an unequal distribution of flights within the MOA. It is not known whether or not the MRNMAP program takes this important factor into account.

The ANG should provide sufficient technical information about the MRNMAP program to allow review of the assumptions and algorithms used to calculate noise levels in MOAs. Further, the ANG should provide justification for the assumption of uniform distributions of flights within each of the MOAs.

1.3 Onset Rate-Adjusted Monthly Day Night Level

The DEIS uses the Onset Rate-Adjusted Day Night Level for calculating the noise environment in areas, typically Military Training Routes (MTRs), exposed to high speed low level overflights. These flights can produce noise signals where the noise levels increase rapidly. The rapid rise in noise can startle people. USAF studies have shown that a penalty should be added to the SEL noise value to account for the added annoyance due to the sudden onset of the signal.

In published documentation describing the calculation of this penalty, and as stated in Section 3.1.4 of the DEIS, the adjustment to the SEL value ranges from 0 to a **maximum of 11 dB**[2]. However, in Section G.1.2.4 of the DEIS, the maximum penalty is stated to be **5 dB**.

[2] These penalties are applied to noise events. Thus, in an MTR handling several different types of aircraft, the penalties would typically vary with the aircraft and operation and the ground position with respect to the aircraft's flight path.

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The ANG should clarify the size of the onset rate adjustments that were actually used in the analyses, and present the reasons for using a maximum 5 dB adjustment, instead of 11 db, if that is what was done in the DEIS.

2.0 DAY NIGHT LEVEL CRITERIA

The DEIS relies on the DNL metric for assessing the degree of noise impact, and, in particular, it assumes that there would be no significant adverse impact from noise as long as the DNL value remains below 65 dB. This simply reflects U.S. Air Force policy of choosing a DNL value of 65 dB as an arbitrary cutoff for assessing adverse noise impact anywhere under any circumstances. This choice of criterion value ignores several important factors that are not adequately discussed in the DEIS:

(a) The DNL criteria and DNL land use guides are based largely upon consideration of urban and suburban areas having moderate or high population densities. In contrast, most of the areas exposed to noise from the operations covered in this DEIS are wilderness or rural (low population areas) currently exposed to relatively low levels of noise. The DEIS does not discuss the fact that community response to noise (often expressed by complaints from residents) is dependant upon the level of the existing noise levels as well as the level of the intruding noise.

Past studies of community noise indicate that the severity of noise impacts and the resulting likelihood of increases in noise complaints is related to the **magnitude of the changes in the noise environment** as well as the magnitude of the noise levels[3]. This factor is overlooked in the assessment of impact even though several areas will be exposed to relatively large changes in their noise environment.

(b) The applicability of DNL criteria based on developed community areas for assessing impact of noise in wilderness or recreational areas is suspect and unproven. The U.S. National Park Service has been undertaking detailed studies to develop noise criteria for park and wilderness areas. Although the studies are not complete, it is clear from the information published to date that visitors to such areas are less tolerant of noise intrusions in wilderness spaces than in settled community area. Hence, to the extent that DNL criteria may apply to wilderness areas, the DNL value for a given proportion of annoyance will be significantly lower than that for settled community areas.

(c) The curves and equations given in Section G.1.2.3 relating DNL values to annoyance (based upon Schultz, 1978) likely under-predict the percentage of people annoyed by aircraft noise. Recent analyses of the community survey data originally collected by

[3] See the discussion of "normalized" outdoor DNL in the article by Henning. E. von Gierke, Kenneth McK. Eldred, "Effects of Noise On People", **Noise/News International**, Vol.1, No. 2, June 1993.

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RESPONSES TO COMMENTS

Response to Comment No.5

The approach used in the EIS has been modified. The Federal Interagency Committee on Noise (FICON), representing a variety of Federal agencies with a mix of concerns associated with aircraft noise, reviewed aircraft noise analyses issues in 1992. This committee's report (FICON 1992) continued an approach to evaluating relative impacts associated with aircraft noise that has been recognized by noise analysis experts as the most widely endorsed and comprehensive approach to aircraft noise analysis available. This approach to noise analysis was incorporated into the analyses associated with the Draft EIS. In general, Federal land use compatibility criteria are derivatives of guidelines first devised for land near airports. All land use compatibility is based on the use of Day-Night Average Sound Level (abbreviated as DNL or Ldn) as the descriptor representing community noise environments. The criteria treat areas below DNL 65 dB as compatible for all uses, including residential, and they treat DNL 65 dB as a threshold for significant exposure. There is no generally accepted method for treating rural areas differently for these purposes.

However, many EIS reviewers, including some members of the Federal regulatory community, felt the application of the FICON standards, and the 65 dB threshold, to a rural setting was inappropriate for such areas with more quiet ambient noise conditions. Consequently, the use of the 65 dB threshold as the sole means to assess relative impacts or the acceptability of noise levels associated with aircraft operations addressed in the EIS has been modified and the analysis now includes additional information to evaluate potential impacts.

Response to Comment No.6

Cumulative noise impact occurs over extended periods of time. Studies have shown that this is true even for sporadic noise which occurs in military airspaces. The use of busiest month operations does, however, recognize the varying nature of military airspace use. This is a departure from the more commonly used annual average, and emphasizes the impact that occurs during times of heaviest activity in the airspace.

Schultz, together with information from more recent surveys, show a stronger annoyance reaction to aircraft noise than to noise from ground transportation sources[4].

The ANG should update and expand the discussion on noise impacts and more clearly indicate that adverse community reaction to aircraft noise can be expected in areas where there are significant increase in noise (order of 5 dB or greater), even though the DNL values remain below 65 dB.

3.0 VARIABILITY OF AIRCRAFT OPERATIONS

All of the DNL calculations in the DEIS are based on the average of operations on the busiest month of operations. However, the daily number of operations to which the population will be exposed will likely vary from none at all to a number much higher that the average number used in the DNL calculations. This large variability in daily noise events (and resultant large variations in the daily DNL values) is an important aspect of the type of noise environment to which people will be exposed to. 6

The ANG should provide a discussion about the expected large day-to-day variability in the noise environment.

Sincerely,

Dwight Bishop

Dwight Bishop

cc: Dale Ahlquist, Director, National Airspace Coalition

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[4] See the article by Lawrence S. Finegold, C. Stanley Harris and Henning E. von Gierke, "Community Reaction to Noise", Noise Control Engineering Journal, Vol. 42, No. 1, Jan-Feb 1994.

ATTACHMENT 1

DWIGHT BISHOP QUALIFICATIONS SUMMARY

I am an acoustical consultant with over forty years work experience in the field of applied acoustics. For the last thirty years, my activities have centered on community and transportation noise, with emphasis on aircraft noise. My academic background includes a B.S. degree in Engineering Physics and a M.S. degree in Physics. I am a Fellow of the Acoustical Society of America and a member of the Institute of Noise Control Engineering.

I have undertaken a wide range of applied research and consulting studies for various governmental agencies, communities, airports and private industry. These studies have included work for a number of federal agencies, including the EPA, FAA, NASA, HUD and the U.S. Air Force, Army and Navy. I have served as a technical advisor and consultant to many airports, including all major airports in California.

I have been deeply involved in the development of airport noise prediction programs and procedures in studies sponsored by the FAA, EPA and the U.S. Air Force. I was the project manager for the initial development of the NOISEMAP computer program which is one of the two airport noise contour programs in widespread use in this country. I recently headed projects for the Department of Transportation to develop revised and expanded civil aircraft noise and profile data files for use in the newest version of the Integrated Noise Model (INM) airport noise contouring program.

My earlier work included psychoacoustic field studies involving the assessment of the noisiness of aircraft flyover noise, the preparation of practical guides for improving the noise insulation of buildings with respect to aircraft noise, and the development of detailed plans for field noise surveys in communities.

I have served as an expert witness in a number of important airport noise civil cases in both federal and state courts (the most recent cases include litigation involving Ontario International, Long Beach and Burbank airports in California).

440 Bear Peak Rd.
Westcliffe, CO 8252
May 21, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Ave.
Andrews AFB, MD 20762-5157

Re: Colorado Airspace Initiative

Dear Sir or Madam:

This letter is written in opposition to the Draft Environmental Impact Statement (DEIS). We searched high and low for a peaceful, beautiful rural area to live in, an area that would also provide us income. We settled in rural Westcliffe just over a year ago. Since then, we have enjoyed a quiet, peaceful, high quality of life except for noisy fly-overs, some of which were almost eye to eye with us from the deck of our home and almost shook the china from its cabinet. There was such a noise, we thought we were being invaded! 1

In studying the DEIS, it is apparent that the findings are based on a idiotic type of noise analysis - "Day-Night Averaging". Our Valley and surrounding areas are so free from noise that the noise impact of an F-16, F111, B-1 or B-52 is not only annoying but harmful. We moved here because it is quiet. And, the economic impact increased overflights could have may bring us to economic ruin as home building (Rudy is a carpenter) could decrease as the quality of life decreases because of undesirability of the area. 2 3

How could Schultz's 1978 study curb be used in comparison with what's being proposed here?! There is no comparison! Land noise is no comparison to an F-16 or B-52! And a rural/wilderness area does not compare to urban communities. What's going on here? Get real. The DEIS is a farce! 4

We hope and pray for the elimination of Airburst MOA, LaVeta MOA and all MTRs leading to the Airburst Range and <u>at the very least</u> use the alternative which has been present in the LaVeta MOA for the last 5 years - Sortie levels of 250-350. 5

Sincerely,

Rudy Brown and Diane Brown

cc: Custer County Action Association
Governor Roy Romer
Senator Hank Brown
Congressman Scott McInnis
Senator Ben Nighthorse Campbell

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

Response to Comment No.3

Overflights would decrease in the La Veta MOA under the Preferred Alternative.

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in these areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group and the ANG to reach a compromise solution acceptable to the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Response to Comment No.4

The noise-annoyance relation presented in Appendix G of the draft EIS was Schultz's original 1978 curve. It has been updated and validated several times since that time, and has been shown to be applicable to a wide variety of settings, including rural areas. In the Final EIS, Appendix G has been updated to show the current version of the Schultz curve.

Response to Comment No.5

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

FAX/MEMO

from

KEVIN P. BUNNELL

Consultant to Continuing Medical Educators

1010 Rose Hill Drive
Boulder, Colorado 80302-7148

Phone: 303=443-0642
FAX: 303=449 9387
e-mail: bunnk@aol. com

To: Program Manager
Organization: CAI EIS, ANGRC/CEVP
Tuesday, May 21, 1996
Transmitting 1 page(s), including this page.

Program Manager:

I am a resident of the Wet Mountain Valley, Custer County County, CO.

I want to add my voice to those who reject the Draft Environmental Impact Statement concerning National Guard overflights in the Airburst and LaVeta MOAs. 1

It is inappropriate for the primary interested party to prepare the DEIS independently so that a gross conflict of interest exists.

As a result, inappropriate criteria such as 24 hour sound level averaging appear in the report. Further the report fails to consider the inevitable impact of multiple fighter jets in the area at one time. The report reaches the astounding conclusion that toxic emissions and decibel levels exceeding 130 dBs resulting from 5000 overflights in a relatively short period of time will have "No significant impact..". on the environment. 2 3

Of course National Guard pilots will need low level training, but Not In My Back Yard and not in the Wet Mountain Valley.

Kevin P. Bunnell

Kevin P. Bunnell

Our Wet Mt. Valley home is at
2279 Aspen Trail Drive
Silver Cliff Heights.

1 of 1

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RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

Response to Comment No.3

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

May 21, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

RE:: Colorado Airspace Initiative - Draft Environment Impact Statement

Dear Sirs:

We have lived in Denver-Stapleton and Buckley Air National Guard flight patterns since January of 1988. We lost some of this noise with the opening of DIA, however, that redirected Buckleys flight pattern directly over our home. These flights come and go every day at all hours, imagine being awakened by the noise of a jet taking off, flying directly over your home, the walls are shaking and the noise is deafening.!!! How would you like that?? It makes no difference what you are doing, sleeping, working, talking on the telephone or talking to a neighbor you have to stop because the noise is deafening and very disturbing. It is a constant sound at high decibels and it is not averaged over a 24 hour period. It is instant. 1

We recently purchased property in the Wet Mountain Valley to get away from being awakened by screaming jets as they take of and land. By begining your MOA's and MTR's you will destroy our quality of life, affect our wildlife in the area, destroy our property value and economy and add the risk of losing our homes etc due to forest fires started by the crash of one of your jets. And here we thought that your job was to protect us, when it evidently has changed to the idea of destroy us. 2

We sincerely hope that you will leave this peaceful valley alone. There are other valleys more distant from metropolitan areas that are less populated and would serve just as well. Please investigate the those other areas and do not destroy the peace and quiet of the Wet Mountain Valley.

Sincerely:

Mr & Mrs Harold Cline

Mr & Mrs Harold L. Cline
857 Deerhaven Drive
Westcliffe, CO 81252

CC:Custer County Action Association
Govenor Roy Romer
Senator Hank Brown
Congressman Scott McInnis
Senator Ben Nighthorse Campbell

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RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

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1723 Van Diest
Colorado Springs, CO 80915
719-591-2695
21 May 1996

Air National Guard Readiness Center
Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews Air Force Base, MD 20762-5157

Subject: Lack of Calibrated Test Equipment for the Colorado Air Initiative.

Reference: Air National Guard, National Guard Bureau, Draft Environmental Impact Statement for the Colorado Airspace Initiative, Volume I - Impact Analyses, and Volume II - Appendices, March 1996.

The noise measurements contained in the reference are flawed. This leads to an erroroneous conclusion. The following comments are provided by 05 JUN 96 to meet the deadline required by the reference.

The description of the test equipment used for the noise measurements is incomplete. The specifications of this test equipment should be presented in their entirety. The calibration data for this test equipment should be presented. The directivity of each microphone should be presented as a function of frequency. The placement of the microphone should be described for each test location to include the obscura for 360 degrees around each microphone location. Data should be presented on the peak noise pulse amplitude and duration relative to the ambient background noise for each aircraft type proposed to be used in each Military Operations Area (MOA) and each Military Training Route (MTR). The data presented defines only the background noise by averaging over a long period of time.

The noise measurements should be redone and published as a second draft for another set of public comments. The accuracy of the current noise measurements does NOT support the conclusion stated on page xx as follows: "Based upon public and agency input and the analyses conducted thus far, the Original Proposal, Preferred Alternative, and No-Action Alternative do not appear to result in significant environmental impacts."

Marvin E. Hollar

cc:

The Honorable Roy Romer
Room 136
State Capitol Building
Denver, CO 80203

Mr. Jim Peck
Policy Advisor
Office of the Governor
135 State Capitol Building
Denver, CO 80206

The Honorable Hank Brown
U. S. Senator
1200 17th Street, Suite 2727

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1

RESPONSES TO COMMENTS

Response to Comment No.1

Instrumentation used is identified in Appendix G, and specifications are summarized. All instrumentation meets Type 1 standards. Prior to the measurements, all instrumentation was calibrated by certified technicians, following manufacturer's requirements. Field calibration was accomplished as noted in Subsection H-3.

All microphone positions were in open areas not affected by local reflecting surfaces.

Data presented in Appendix H includes long term and hourly average (Leq) and statistical (L01, L10, L50, L90) levels, plus the time, duration, maximum level, peak level, and SEL for each individual noise event.

Denver, CO 80202

The Honorable Ben Nighthorse Campbell
U. S. Senator
World Savings Building
720 North Main Street, Suite 20
Pueblo, CO 81003

The Honorable Joel Hefley
U. S. House of Representatives
104 South Cascade
Colorado Springs, CO 80903

The Honorable Scott McInnis
U. S. House of Representatives
132 West B Street
Pueblo Union Depot
Pueblo, CO 81003

Mr. Ted Mellan
FAA Northwest Mountain Region
1601 Lind Avenue SW
Renton, WA 98055

Mr. Richard Prang
Manager, System Management Branch
FAA Northwest Mountain Region
1601 Lind Ave. S. W.
Renton, WA 98055-4506

Mr. Wayne A. Smith
Air Traffic Manager
Denver ARTCC
2211 17th Avenue
Longmont, CO 80501

Maj. Richard C. Williams
FAA Northwest Mountain Region
ANM-900
1601 Lind Avenue SW
Renton, WA 98055-4056

The Honorable Sally Hooper
Colorado State Senate
Colorado State Capitol
200 East Colfax
Denver, CO 80203

The Honorable Phil Pankey
Colorado House of Representatives
Colorado State Capitol
200 East Colfax
Denver, CO 80203

The Honorable R. D. "Bud" Moellenberg
Colorado House of Representatives
Colorado State Capitol
200 East Colfax
Denver, CO 80203

The Honorable Bill Owens
Colorado State Senate
Colorado State Capitol
200 East Colfax
Denver, CO 80203

The Honorable Bob Pastore
Colorado State Senate
Colorado State Capitol
200 East Colfax
Denver, CO 80203

The Honorable Linda Powers
Colorado State Senate
Colorado State Capitol
200 East Colfax
Denver, CO 80203

The Honorable Tom Ratterree
Colorado House of Representatives
Colorado State Capitol
200 East Colfax
Denver, CO 80203

The Honorable James Rizzuto
Colorado State Senate
Colorado State Capitol
200 East Colfax
Denver, CO 80203

The Honorable Gilbert E. Romero
Colorado House of Representatives
Colorado State Capitol
200 East Colfax
Denver, CO 80203

The Honorable Mike Salaz
Colorado House of Representatives
Colorado State Capitol
200 East Colfax
Denver, CO 80203

The Honorable Paul Schaur
Colorado House of Representatives
Colorado State Capitol
200 East Colfax
Denver, CO 80203

The Honorable Bob Shoemaker
Colorado House of Representatives

Colorado State Capitol
200 East Colfax
Denver, CO 80203

The Honorable Mary Anne Tebedo
Colorado State Senate
Colorado State Capitol
200 East Colfax
Denver, CO 80203

The Honorable Bill Thiebault
Colorado House of Representatives
Colorado State Capitol
200 East Colfax
Denver, CO 80203

The Honorable Dave Wattenberg
Colorado State Senate
Colorado State Capitol
200 East Colfax
Denver, CO 80203

Mr. John Coleman
Board of Commissioners
Custer County
1277 Road 118
Westcliffe, CO 81252

Ms. Genevieve Anton
Gazette Telegraph
P. O. Box 1779
Colorado Springs, CO 80901

Ms. Constance Baucum
Wet Mountain Tribune
P. O. Box 300
Westcliffe, CO 81252

Mr. Dick Foster
Rocky Mountain News
7 East Bijou, Suite 204
Colorado Springs, CO 80903

News Director
KRDO News 13
24 Club Manor Road
Pueblo, CO 81008

Mr. Robert Senderhauf
Custer County Action Association
902 Main Street
Westcliffe, CO 81252

Ms Susan Nequette
Custer County Action Association
P. O. Box 186
Westcliffe, CO 81252

Mr. Roger E. McDonald
Custer County Airport Authority
318 Deerhaven Drive
Westcliffe, CO 81252

Mr. & Mrs. Dick & Janice Downey
Custer County Airport Authority
10844 County Road 255
Westcliffe, CO 81252

Mr. Bill Hamilton
Aircraft Owners and Pilots Association
P. O. Box 2001
Gramby, CO 80446

Mr. J. Scott Hamilton
Colorado Pilots Association
401 Spruce Street
Louisville, CO 80027

Mr. C. Roger Saffer
Vice President
Colorado Agricultural Aviation Association
2150 W. 29th Ave., Suite 500
Denver, CO 80211

Mr. Tom Templeton
San Luis Valley Pilots Association
303 Dunham
Monte Vista, CO 81144

5/21/96

Dear Sir:

I am a 17 year veteran teacher, who lives in Thornton and owns property in Westcliffe, Colo. I am outraged to hear the Air National Guard plans to direct military training routes over Custer County. Westcliffe is my sanctuary, a place to get away from the noise I daily encounter in Thornton. 1

Westcliffe is not only my sanity-saver, but a place where tourists and natives can enjoy the best the Rocky Mountains has to offer: the balm of nature. Three hours is a long drive to find solitude, in the 1970's I used to be able to find it much closer to Denver, but the unbridled growth of our state has ruined the Front Range. As I write this letter I have heard twelve jets pass overhead in Thornton, and this after all that has been done to "improve" the situation here. Where will all of us go when there is no place left to peace? 2

Imagine yourself sitting on a rock overlooking DeWeese reservoir. The Sangres are shining, the cactus blooming. Now you can see the contrail of commercial jets flying west, and the low rumble occasionally interrupts the chirping of birds and browsing of deer. What will this place be like with additonal military jet noise filling the air? Noise pollution is no better than water or air pollution, the wilderness and wildlife of our state must be protected. 3

There must be places untouched, where man and animals can co-exist without the ugliness of our civilization destroying nature. Mankind needs these places to refresh his soul, and wildlife can't exist with constant bombardment of man. .

I insist the Air National Guard be given no opportunity to fly any jets anywhere near Custer County, Colorado. No military training routes, no military operating areas. 4

Sincerely

Janis Houston

Janis M. Houston
1490 Russell Way
Thornton, Co. 80229
and
67 Colorado Lane
Westcliffe, Co. 81252

376

RESPONSES TO COMMENTS

Response to Comment No.1

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Response to Comment No.2

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.3

Noise from aircraft operations contributes to the overall noise burden on the environment generally referred to as "noise pollution." Military aircraft operations contribute to this burden. Widely accepted means to measure and judge the severity of "noise pollution" do not exist; however, the means to measure or model noise levels does exist. This EIS provides an evaluation of the noise levels associated with military aircraft operations. These levels, when combined with other sources of noise within the environment, contribute to "noise pollution."

Response to Comment No.4

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Written Comment Form

ENVIRONMENTAL IMPACT STATEMENT FOR THE COLORADO AIRSPACE INITIATIVE

MAY 21 1996

If you would prefer to submit written comments on the DEIS, please use this form. Continue on the back of the form or attach extra sheets, as necessary. Thank you.

NAME: Bob Joslen JR

TITLE/ORGANIZATION: OWNER - Westcliffe Properties Inc

ADDRESS: 201 MAIN (Street) ST Westcliffe (City/State/Zip) CO 81252

– COMMENTS –

I strongly believe that any use of Custer County Airspace regarding Airburst MOA, La Veta MOA and all MTRs leading to the Airburst Range would have an tremendous adverse effect on our quality of life, economic climate and wildlife management. I personally suffer from tourism and hope structure tourism and would be forced to sell my business, property and have the area to avoid the noise caused by the supersonic noise pollution

1

2

Bob Joslen

Please hand this form to the staff, drop into the collection box, or mail to:

Program Manager, CAI EIS
Environmental Division
Air National Guard Readiness Center/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

377

RESPONSES TO COMMENTS

Response to Comment No.1

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

Response to Comment No.2

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Written Comment Form

MAY 2 1 1996

ENVIRONMENTAL IMPACT STATEMENT FOR THE COLORADO AIRSPACE INITIATIVE

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NAME: Bruce A. Lind

TITLE/ORGANIZATION: WESTCLIFFE REIS INC

ADDRESS: 501 MAIN ST (Street) WESTCLIFFE, CO 81252 (City/State/Zip)

– COMMENTS –

Dear Sirs,

This is to express my strong concerns about the noise levels caused by fly overs from the Air National Guard. 1

I moved to this valley to enjoy the quiet this area offers. The main reason I moved here was due to the ear damage I suffered in Viet Nam and the quiet this area offers.

Noise levels caused by air planes causes me extreme discomfort. Increased noise would only cause me more damage than I already received. 2

I strongly urge you to halt any and all fly overs to preserve what little quiet areas we have left in our state.

Don't turn this valley into another DIA where people who moved here for health reasons have to look for other areas.

Sincerely

Bruce Lind

Please hand this form to the staff, drop into the collection box, or mail to:

Program Manager, CAI EIS
Environmental Division
Air National Guard Readiness Center/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

378

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

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Written Comment Form

ENVIRONMENTAL IMPACT STATEMENT FOR THE COLORADO AIRSPACE INITIATIVE

MAY 21 1996

If you would prefer to submit written comments on the DEIS, please use this form. Continue on the back of the form or attach extra sheets, as necessary. Thank you.

NAME: ROBERT L. MAC DONALD

TITLE/ORGANIZATION: REAL ESTATE SALES WESTCLIFFE PROPERTIES INC

ADDRESS: 201 MAIN ST (Street) WESTCLIFFE CO 81252 (City/State/Zip)

– COMMENTS –

Dear Air National Guard

I stingly support the ELIMINATION of Airburst MOA La Veta MOA, and all MTRs leading to the Airburst Range. 1

The air National Guard has a responsibility to protect us, not destroy us.

The noise created by these flights will affect every human living life and destroy our peaceful valley. The animals will also have a negative effect on the domestic and wild animals in the area. 2

The DEIS admits that the Region of Impact has never had this kind of area as a community subject to an airport, and still it uses the same standard of 65 decibels over a 24 hour average as an acceptable level. Based on this standard, according to DEIS, there is no impact on our valley. This is not correct to use this standard and this type of analysis in this peaceful valley. 3,4

I am against low flying aircraft 5

Sincerely,

Robert L. MacDonald

Please hand this form to the staff, drop into the collection box, or mail to:

Program Manager, CAI EIS
Environmental Division
Air National Guard Readiness Center/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

379

RESPONSES TO COMMENTS

Response to Comment No.1

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

Response to Comment No.2

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Response to Comment No.3

The approach used in the EIS has been modified. The Federal Interagency Committee on Noise (FICON), representing a variety of Federal agencies with a mix of concerns associated with aircraft noise, reviewed aircraft noise analyses issues in 1992. This committee's report (FICON 1992) continued an approach to evaluating relative impacts associated with aircraft noise that has been recognized by noise analysis experts as the most widely endorsed and comprehensive approach to aircraft noise analysis available. This approach to noise analysis was incorporated into the analyses associated with the Draft EIS. In general, Federal land use compatibility criteria are derivatives of guidelines first devised for land near airports. All land use compatibility is based on the use of Day-Night Average Sound Level (abbreviated as DNL or Ldn) as the descriptor representing community noise environments. The criteria treat areas below DNL 65 dB as compatible for all uses, including residential, and they treat DNL 65 dB as a threshold for significant exposure. There is no generally accepted method for treating rural areas differently for these purposes.

However, many EIS reviewers, including some members of the Federal regulatory community, felt the application of the FICON standards, and the 65 dB threshold, to a rural setting was inappropriate for such areas with more quiet ambient noise conditions. Consequently, the use of the 65 dB threshold as the sole means to assess relative impacts or the acceptability of noise levels associated with aircraft operations addressed in the EIS has been modified and the analysis now includes additional information to evaluate potential impacts.

Response to Comment No.4

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

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Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

Response to Comment No.5

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

May 21, 1996

Dear Sirs,

I purchased my property in Custer County, Colorado to get away from the noise and pollution of the big city. I had hope to build my retirement home here in Custer County near Westcliff and Silver Cliff. It's a place where you can hear the birds sing, the squirels scurry about the young fawns with there mother close by.

I really don't think you realize what you are asking the people who live here all the time and the tourist who have been coming here for years to give up. A lot of those tourist have purchased land and have a dream of building and retiring in this valley. I know that is my dream.

On any given day you can drive up in the mountains and see as many deer as fifty in a mile or so. Not to mention the herds of antelope you may occasionally see, sometimes as much as a hundred to a herd. We have even seen bears on occasion and all the other wild and domestic animals who call the valley and mountains home.

What right do you have to come swooping in with your planes and noise to destroy this way of life. I invite you and anyone involved in this project to come bring your family and stay in our valley-town and mountains for a few days. I think you will see what you are asking all of us to give up.

I MUST SAY NO THE PROPOSED (MOA).

Sincerely,

A J McGraw
2615 Cedar Bayou Road
Baytown, Texas 77520
(713) 422-6292

1

382

RESPONSES TO COMMENTS

Response to Comment No. 1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

May 21, 1996

From: David Meldman
567 Pearl St.
Boulder, Co 80302

RE: Opposition to Air National Guard airspace plan.

I oppose low altitude training because of the noise levels + frightening presence of war aircraft in rural + wilderness areas in the state of Coloraedo. 1

I oppose expansion of the La Veta + Airburst MOA's.

David Meldman

383

RESPONSES TO COMMENTS

Response to Comment No. 1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

As a property owner of Westcliffe, CO, my wife, Elisa P. Moser and myself, James C. Moser do not approve of the Airburst MOA, La Veta MOA and all MTRs leading to the Airburst Range. We currently reside in California with the hopes of developing our land and retiring at Westcliffe. This land is also an investment for our children who are interested in the wild life and quiet life style of that region . Moreover, where we currently live in California, the airport is fourteen miles away and we can still here single engine planes flying over head everyday. One can just imagine how a Nighthawk or whatever will sound traveling at an altitude of five hundred feet. My father who bought this land and we who continue to pay taxes hope that you reconsider your plan of operation in our neighborhood. 1 2 3

Sincerely,

James C. and Elisa P. Moser

James C. Moser and Elisa P. Moser
P.O. Box 23034
Santa Barbara, California, 93121-3034

May 21, 1996

384

RESPONSES TO COMMENTS

Response to Comment No.1

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

Response to Comment No.2

There would be some changes in sortie numbers, noise levels, and airspace dimensions under the Original Proposal and the Preferred Alternative addressed in the EIS. However, overall flying hours of the 140 WG will be reduced from 5005 hours to 4600 hours. When compared to existing military aircraft training in the study area, these changes would not change the current levels of solitude and peace and quiet experienced by residents. As under current conditions, noise from military aircraft operations may periodically disturb citizens and affect their enjoyment of solitude; however, opportunities for abundant periods of total peace and quiet would continue as under present conditions.

Response to Comment No.3

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Written Comment Form

MAY 21 1996

ENVIRONMENTAL IMPACT STATEMENT FOR THE COLORADO AIRSPACE INITIATIVE

If you would prefer to submit written comments on the DEIS, please use this form. Continue on the back of the form or attach extra sheets, as necessary. Thank you.

NAME: Michael E Patterson

TITLE/ORGANIZATION: Real Estate Broker - Westcliffe Properties Inc

ADDRESS: 201 main (Street) Westcliffe CO 81252 (City/State/Zip)

– COMMENTS –

Dear Air National Guard,

I would like to voice my objection to the Colorado Airspace Initiative. Specifically I would like the elimination of Airburst MOA, La Veta MOA and all MTRs leading to the Airburst Range. 1

As a county resident, I feel this type of air activity would diminish my rights to a peaceful lifestyle. The noise alone would be a definite health risk to myself and my neighbors. Also, as a potential landowner, I see this initiative as a negative impact on the beautiful beauty that the Wet mountain valley has to offer. The beauty of the serenity and wildlife would be a critical loss. Let us not tarnish one of the few natural areas left in Colorado that has not been overrun by our society. Thank you for listening to my concerns. 2 3

Mike Patterson

Please hand this form to the staff, drop into the collection box, or mail to:

Program Manager, CAI EIS
Environmental Division
Air National Guard Readiness Center/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

385

RESPONSES TO COMMENTS

Response to Comment No.1

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

Response to Comment No.2

There would be some changes in sortie numbers, noise levels, and airspace dimensions under the Original Proposal and the Preferred Alternative addressed in the EIS. However, overall flying hours of the 140 WG will be reduced from 5005 hours to 4600 hours. When compared to existing military aircraft training in the study area, these changes would not change the current levels of solitude and peace and quiet experienced by residents. As under current conditions, noise from military aircraft operations may periodically disturb citizens and affect their enjoyment of solitude; however, opportunities for abundant periods of total peace and quiet would continue as under present conditions.

Response to Comment No.3

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Written Comment Form

MAY 2 1 1996

ENVIRONMENTAL IMPACT STATEMENT FOR THE COLORADO AIRSPACE INITIATIVE

If you would prefer to submit written comments on the DEIS, please use this form. Continue on the back of the form or attach extra sheets, as necessary. Thank you.

NAME: Barbara Perry

TITLE/ORGANIZATION: Westcliffe Properties, Inc.

ADDRESS: PO BOX 537, (Street) Westcliffe, CO 81252 (City/State/Zip)

– COMMENTS –

If you lived in this quiet area would you want to be invaded? We've been fighting this for years -- we don't want you to fly over us! What do we have to do to get it through your heads? 1

The noise tests you've done, did it take into consideration the echoing effect? Not to mention the health of our wild life. 2

GO AWAY! STAY AWAY! Come and ENJOY A PEACEFUL VISIT -- But LEAVE YOUR NOISE AT HOME! I CAME HERE TO get AWAY FROM THE NOISE -- don't need it -- don't WANT it.

Please hand this form to the staff, drop into the collection box, or mail to:

Program Manager, CAI EIS
Environmental Division
Air National Guard Readiness Center/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

RESPONSES TO COMMENTS

Response to Comment No. 1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No. 2

Noise measurements, by their nature, accounted for all effects present at the measurement locations.

Written Comment Form

MAY 2 1 1996

ENVIRONMENTAL IMPACT STATEMENT FOR THE COLORADO AIRSPACE INITIATIVE

If you would prefer to submit written comments on the DEIS, please use this form. Continue on the back of the form or attach extra sheets, as necessary. Thank you.

NAME: Michaell Sabinas

TITLE/ORGANIZATION: Business owner of Wiatcliff Imp Inc

ADDRESS: 201 Main Street Westcliffe Co
(Street) (City/State/Zip)

– COMMENTS –

Communities of Ourhurst MOA, La Veta MOA, and all MTR's leading to Ourhurst Range - having moved from a large city to Ourhurst was supposed to be to a memorial decade - Bull- lives close (5-10 miles) of a flight pattern for International airport - would that not devalue my

Our valley attracts because we offer quiet, space serenity - I hate to break what's been a low flying plane over my home - causing it to shake - during our animals. To become frightened - so yes it does effect our domestic + our wildlife It will effect our property values - It may also effect our property - the continued obstruction can loosen rock formations - can create land slides -

It is obvious to our Congressmen's move it to the desert plains of Nevada California - with today's technology anything can be simulated / especially by the US Government -

I highly object to MOA

Michaell Sabinas

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Environmental Division
Air National Guard Readiness Center/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

387

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RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

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There would be some changes in sortie numbers, noise levels, and airspace dimensions under the Original Proposal and the Preferred Alternative addressed in the EIS. However, overall flying hours of the 140 WG will be reduced from 5005 hours to 4600 hours. When compared to existing military aircraft training in the study area, these changes would not change the current levels of solitude and peace and quiet experienced by residents. As under current conditions, noise from military aircraft operations may periodically disturb citizens and affect their enjoyment of solitude; however, opportunities for abundant periods of total peace and quiet would continue as under present conditions.

Response to Comment No.3

It is possible that aircraft noise could startle domestic animals, especially young or penned animals, and cause them to injure themselves. However, animals adapt and habituate to various sound sources, including jet aircraft noise. Because the airspaces associated with the CAI are mostly existing airspace that have been utilized for over 25 years, this adaptation and habituation to jet aircraft noise has likely already occurred.

110L Michael Sabinas

Response to Comment No.4

Studies conducted on wildlife have shown that numerous wildlife species have the ability to adapt to the presence of man and various man-made sound sources, including jet aircraft noise. While the noise generated from low-altitude military overflights may be initially startling, habituation to jet aircraft noise occurs with most wildlife species. Species-specific responses to low-altitude overflights vary considerably, and responses from individual animals may have the potential to cause injury. However, wildlife populations are usually affected only when a variety of factors work in combination to impact them, including declines or fluctuations in the availability of a food source, habitat destruction or alteration, predation, hunting, trapping, poaching, disease, or inclement weather, rather than noise alone. Normally, it would be unrealistic to predict or attribute any wildlife population declines to a single stressor, such as noise. In addition, no published scientific evidence was identified that indicated harm may occur to wildlife as a result of exposure to the levels of noise generated by military aircraft that would utilize the airspace associated with the Colorado Airspace Initiative.

Response to Comment No.5

There are no known incidents of aircraft noise of this type loosening rock formations or causing landslides.

Response to Comment No.6

The use of other training areas was examined as part of the development of the alternatives studied in detail in the EIS in Subsection 2.3. The proposal was designed to minimize conflicts with potentially sensitive areas while providing the training resources necessary to meet military readiness requirements. Specific narrowing criteria for the selection of military training airspace (see Subsection 2.3.3 in Volume I) were used to evaluate other locations, and no alternative training areas were identified that could be substituted for the airspace configuration proposed in the alternatives studied in the EIS.

The primary user of the airspace included in the Colorado Airspace Initiative is the 140 WG based at Buckley Air National Guard Base in Aurora, Colorado. Because of limited resources and aeronautical constraints, virtually all of our nation's fighter units train in airspace that is within a "tank of gas" of the aircrews' base.

RESPONSES TO COMMENTS

Response to Comment No.7

The use of flight simulators for pilot training is already part of the training program for various aircraft using the affected airspace. The F-16 training regulation (AFI 11-F16) stipulates those activities that may be accomplished using simulators and those requiring actual flying. Although flight simulators work well for certain types of training (e.g., emergency procedures and instrument training), the complete substitution of simulator training for all flight training is not a viable alternative. In addition, the availability of simulators for on-going readiness training is limited and not currently at the 140 WG.

May 21, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

I am submitting the following protest to the LaVeta MOA:

To the citizens of Southern Colorado, Wake Up!

The sky may be falling and you will be the first to hear it. We recently bought property in Huerfano County, Colorado. This was to be our retirement home location. I had planned to start construction this summer; however, with the current aircraft noise levels in this "combat zone," this construction will not occur. This fact is not based on statistical numbo-jumbo, it is based on actual ear drum pain! This is a very significant impact for this citizen. As a citizen and property owner in Huerfano County, Colorado, I must protest the blatant Air Force attitude that they own the sky. The Air Force attitude is typical of all government entities. They have forgotten who their boss is. The citizens of the United States have the power to control government, or this is not America. 1

I have observed KC135, C130, B1's, C5 and other very large, fast and noisy military aircraft and large helicopters maneuvering in the late evening. The large helicopters produce high levels of noise pollution in the sound spectrum. Many other unidentifiable aircraft have been seen flying large circles after dark over Huerfano County. The noise pollution is loud and continuous. I have seen 5 aircraft at once. These were not commercial airliners. They use several high altitude jet airways crossing this area which only adds to the noise levels. 2

This area of Colorado is not deserted. It has many communities with people living in them. The military does not observe speed, altitude, or noise requirements of civil aviation. The military must step up and assume their responsibility as "stewards of the environment!" It is obvious that military flight operations have no regard for people they "work for." The continued belligerent attitude of the military by not listening to the citizens will bring change. The public will not and should not tolerate noise abuse inflicted by the government. 3

There are solutions:

(1) The military should use flight simulators for training pilots. For more than 20 years airlines have used flight simulators to train pilots because it is cheaper and safer than actual aircraft flights. Once again, the military has shown a lack of concern about cost or safety. All one needs to do to prove this is to review the appalling crash rate of military and government aircraft. Flight simulators would reduce the costs in fuel, aircraft, and property, eliminate exposure, and save the lives of citizens and pilots. 4

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RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

The ANG is currently working with Peterson Air Force Base and other flying units to ensure their knowledge of noise sensitive areas in Colorado.

Response to Comment No.3

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.4

The use of flight simulators for pilot training is already part of the training program for various aircraft using the affected airspace. The F-16 training regulation (AFI 11-F16) stipulates those activities that may be accomplished using simulators and those requiring actual flying. Although flight simulators work well for certain types of training (e.g., emergency procedures and instrument training), the complete substitution of simulator training for all flight training is not a viable alternative. In addition, the availability of simulators for on-going readiness training is limited and not currently at the 140 WG.

Response to Comment No.5

Night time flights (10pm -7am) are not included in the CAI proposal. Low-altitude flight training cannot be eliminated without substantially restructuring the wartime tasking for the many units that comprise the United States Air Force's total integrated operations plan. However, anyone who experiences excessive aircraft noise should contact the public affairs officer at the nearest military installation or call (800) 582-8507 to report the incident.

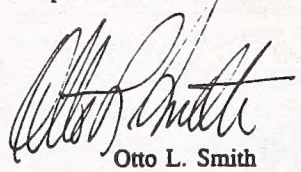
Military aircraft may operate in excess of 250 knots (288 m.p.h.), below 10,000 feet MSL, in accordance with Federal Aviation Regulation (FAR) Part 91.117, para (d) or when operating within the confines of Special Use Airspace or certain Military Training Routes.

(2) Eliminate all night time flights in this area and all low altitude high speed flights. The Federal Aviation Administration (FAA) Regulations restrict all flights under 10,000 ft. of altitude to 250 kts. Military aircraft should be required to comply with this ruling.] 5

(3) Reduce flight operations. Reducing the total number of flight operations will reduce the total noise exposure and increase public safety.] 6

(4) The ultimate solution would be to totally eliminate flight operations in this area.

The military should listen to the citizenry. Speak up Southern Colorado!



Otto L. Smith
3402 S. Dallas Court
Denver, CO 80231
(303) 755-2287

cc: Custer County Action Association
Governor Roy Romer

RESPONSES TO COMMENTS

Response to Comment No.6

Under the Preferred Alternative, flying hours would be reduced from 5005 hours to 4600 hours, as compared to the No-Action Alternative.

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THE INSIDE STORY

Military pilots live dangerously, crash stats show

By John Diamond

Associated Press

WASHINGTON — As the roaring jets of the F-14 Tomcat fighter slammed him back in his pilot's seat, Lt. Cmdr. John Stacy Bates waited to punch through the clouds and into the blue sky over Nashville, Tenn.

A commercial pilot watching the display radioed the tower: "Delta 1-5-6-6, can we get what that other guy got?" The controller replied, "Catch him if you can."

Seconds later, Bates' plane plunged out of the clouds and crashed, killing Bates, his crewman and three on the ground. The Jan. 29 crash was one of at least four of an F-14 this year.

FLIP TO INSIDE BACK PAGE/30A

THE INSIDE STORY

Military pilots faces much grimmer odds than civilians

Continued from 3A

Pilots instinctively understand that military aviation is inherently more dangerous than commercial aviation. An examination of crash statistics demonstrates just how wide the gap is.

A Navy pilot taking off in an F-14 is 24 times more likely to have a serious or fatal accident than a commercial pilot, based on a comparison of accident rates over the past 15 years. A pilot of any U.S. military aircraft would be 10 times as liable as a civilian counterpart to have a serious or fatal crash. Accident rates measure the number of serious or fatal crashes per 100,000 hours flown.

"You're making simulated bombing runs, you're doing close air support, you're flying in formation in close proximity to other aircraft, you're flying close to the ground — it is more hazardous," said Sen. John Glenn, D-Ohio, who was operations officer for a Marine fighter squadron before his astronaut days.

Still, the rate of serious military aviation accidents is declining. The Pentagon even turned its focus onto problems in commercial aviation, suspending for a month any travel by military personnel on ValuJet after that airline's fatal crash May 11 in the Florida Everglades.

But all is not well in military aviation, and the Bates case illustrates some of the problems that have drawn close scrutiny.

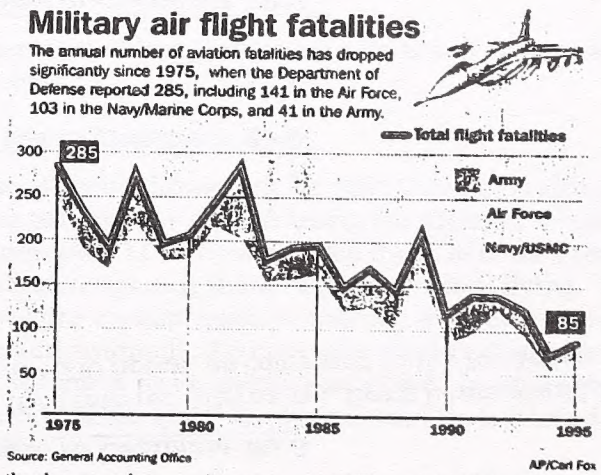
This year:

■ The Marine Corps, which has the dubious honor of flying the most dangerous fighter plane in the military, the vertical-takeoff AV-8B Harrier, ordered a two-day halt to non-essential flights in March after 10 Marine planes and helicopters crashed in the first three months of the year. Just this month, two Marine helicopters collided in a mock battle over North Carolina, killing 14.

■ The Navy, which ordered a similar "stand-down" of its West Coast squadrons in February, is concerned that some pilots may be ejecting from foundering aircraft too late.

■ An embarrassed Air Force admitted after the crash of Commerce Secretary Ron Brown's plane that the aircraft, a T-43, had no "black box" flight-data recorder and was using an outdated autopilot system. Brown and 34 others died in that crash on a Croatian hillside.

Defense Secretary William Perry ordered the services to install the data recorders on all passenger-carrying planes.



From 1984 through 1994, forty-two U.S. commercial jets were destroyed in crashes. In that same period, 1,523 military aircraft have been destroyed at a loss to taxpayers of $21.2 billion. The commercial crashes claimed the lives of 125 crew members, while the military crashes claimed 1,633 service members, according to statistics gathered by the General Accounting Office and the National Transportation Safety Board.

When the 1,520 passengers killed in U.S. commercial crashes in that time are included, the loss of life is comparable, but each commercial flight typically carries scores or hundreds of passengers, while military flights often consist of a crew of one or two.

Over the past 20 years, the rate of military crashes has declined by nearly two-thirds, from 4.3 "class A" accidents per 100,000 flying hours in 1975 to 1.5 last year. A class A incident involves a fatality, permanent disability or at least $1 million in damage to the aircraft.

Though these rates are much higher than in the commercial sector, the crash rate for "general aviation," small, private aircraft, is higher still, running between eight and 10 crashes per 100,000 hours over the past decade.

Rep. Ike Skelton, D-Mo., who commissioned the GAO study, said the military's push for high performance is a factor in its aviation accident rate: "You want people to fly military airplanes, particularly those in combat, who are not afraid to live on the edge. A very cautious pilot will not make a great fighter ace."

But how do you draw the line between the hot dog and the "top gun"?

"I don't think there's any doubt that there have been times in the history of military aviation when the macho image or the desire to embellish the macho image has led to accidents, some of them tragic," said Sen. John McCain, R-Ariz., a former Navy fighter pilot. "But these people, given the mission they've been assigned, have to believe they're the best."

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Written Comment Form

ENVIRONMENTAL IMPACT STATEMENT FOR THE COLORADO AIRSPACE INITIATIVE

MAY 21 1996

If you would prefer to submit written comments on the DEIS, please use this form. Continue on the back of the form or attach extra sheets, as necessary. Thank you.

NAME: Tom Steinkoenig

TITLE/ORGANIZATION: Agent for Westcliffe Properties

ADDRESS: 104 N. Adams Blvd. (Street) Westcliffe, CO 81252 (City/State/Zip)

– COMMENTS –

My wife and I left Denver when we found Westcliffe and moved to a nice quiet spot of Gods beauty.

One of the main factors in our decision to move was the noise factor in Denver. I timed the flights over our house in Denver – every 30 seconds there was a comercial flight taking off or landing from the airport which is about 15 miles from where we lived.

Due to the fact that my ears have been battered from being a band teacher for 23 years and I have a continual ringing in my ears Westcliffe seemed wonderful! Not a sound! 1

But now this! – I was at the meeting last night May 16Th and I was very disappointed that the man I (Bob Senderhoff) was not given more time to speak. 5 minutes was not enough for a man who has spent 6 years work on this subject. 2

I totally support Bob Senderhoff I am against Low flying aircraft! 3

Please hand this form to the staff, drop into the collection box, or mail to:

Program Manager, CAI EIS
Environmental Division
Air National Guard Readiness Center/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

RESPONSES TO COMMENTS

Response to Comment No.1

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Response to Comment No.2

In order to allow everyone an opportunity to comment at the public hearings, a time limit of 5 minutes was established for each individual oral comment. After everyone had spoken once, individuals were given an opportunity to speak again in additional rounds in case the initial 5 minute period had not been adequate for an individual to complete their comments. This was repeated until everyone had given all their comments. No oral comment sessions ended with commentors indicating they wished to give further comments.

Response to Comment No.3

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Written Comment Form

MAY 21 1998

ENVIRONMENTAL IMPACT STATEMENT FOR THE COLORADO AIRSPACE INITIATIVE

If you would prefer to submit written comments on the DEIS, please use this form. Continue on the back of the form or attach extra sheets, as necessary. Thank you.

NAME: John Todovich

TITLE/ORGANIZATION: Westcliffe Properties, Inc.

ADDRESS: 201 Main St (Street) C.S, CO [redacted] 81252 (City/State/Zip)

– COMMENTS –

As a resident of Westcliffe Colorado for the past 10 years, I Strongly Am not interested in your intention to Fly the National Guard jets over the Wet Mountain Valley and I insist that you eliminate the Airburst MOA, La Veta MOA and all MTRs leading to the Airburst Range. Not only is it annoying to Humans and wildlife, it is also very dangerous and a waste of our tax dollars. 1 2 3

John Todovich

Please hand this form to the staff, drop into the collection box, or mail to:

Program Manager, CAI EIS
Environmental Division
Air National Guard Readiness Center/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

RESPONSES TO COMMENTS

Response to Comment No.1

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

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Written Comment Form

MAY 2 1 1996

ENVIRONMENTAL IMPACT STATEMENT FOR THE COLORADO AIRSPACE INITIATIVE

If you would prefer to submit written comments on the DEIS, please use this form. Continue on the back of the form or attach extra sheets, as necessary. Thank you.

NAME: Sheri A. Touren - Secretary

TITLE/ORGANIZATION: Westcliffe Properties Inc.

ADDRESS: 201 Main St. (Street) Westcliffe Co. 81252 (City/State/Zip)

– COMMENTS –

Dear Sir,

I have lived in Westcliffe the biggest part of my life & I feel it would really be a hardship for you to fly your jets over our nice quiet town. MOA is not for Westcliffe. It had enough the big City's have to have all the noise and pollution you don't need to bring in to the small towns.

The noise from the jets hurts all of our ears and the animals as well.

I say NO to M.O.A.

Sincerely

S Touren

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Please hand this form to the staff, drop into the collection box, or mail to:

Program Manager, CAI EIS
Environmental Division
Air National Guard Readiness Center/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

395

RESPONSES TO COMMENTS

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Response to Comment No.2

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

396

Written Comment Form

MAY 2 1 1996

ENVIRONMENTAL IMPACT STATEMENT FOR THE COLORADO AIRSPACE INITIATIVE

If you would prefer to submit written comments on the DEIS, please use this form. Continue on the back of the form or attach extra sheets, as necessary. Thank you.

NAME: Hank Trujillo

TITLE/ORGANIZATION: Real Estate Agent / Westcliffe properties, Inc

ADDRESS: 201 main (Street), Westcliffe, Co 81252 (City/State/Zip)

-- COMMENTS --

I Strongly oppose the New Air Natl. Guard Military Operations MOA + Military Training Routes over the Wet Mountain Valley!! 1

This Operation would Strongly affect our Wild life, domestic stock, as well as more important Human Lives. Not to mention the Vegetation Growth which all of the above rely the sole means of Existence in the Valley, there is Absolutely no other Means of survival in this Valley. 2

Hank Trujillo

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MAY 2 1 1996

If you would prefer to submit written comments on the DEIS, please use this form. Continue on the back of the form or attach extra sheets, as necessary. Thank you.

NAME: Jake Trujillo

TITLE/ORGANIZATION: <Real Estate Sales> Westcliffe Properties Inc.

ADDRESS: 201 main (Street) P.O. Box 790 Westcliffe, Co. 81252 (City/State/Zip)

– COMMENTS –

I feel the noise factor of the MOA is Impinging on my personal life as well as on my business.

I have invested money on land as well as on a cabin. I also have horses which do not behave well with the noise factor. I am set dead against the idea + support the group against it.

Thank you.

Jake Trujillo

1

Please hand this form to the staff, drop into the collection box, or mail to:

Program Manager, CAI EIS
Environmental Division
Air National Guard Readiness Center/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

397

RESPONSES TO COMMENTS

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Written Comment Form

MAY 2 1 1995

ENVIRONMENTAL IMPACT STATEMENT FOR THE COLORADO AIRSPACE INITIATIVE

If you would prefer to submit written comments on the DEIS, please use this form. Continue on the back of the form or attach extra sheets, as necessary. Thank you.

NAME: Ron Trujillo + Felicia Trujillo

TITLE/ORGANIZATION: Property Owners

ADDRESS: 21698 Hwy 160 West (Street) Durango CO 81301 (City/State/Zip)

– COMMENTS –

I STRONGLY oppose, as does my wife, the MOA's and MTR's that the Air National GUARD would like to initiate in our beautiful Area! The absurdity of the United States to jeopardize the wildlife, domestic ANIMALS, and HUMAN'S Right to enjoy peace and quiet that our forefather's tried to provide us, is preposterous! The Colorado Airspace Initiative is not taking into consideration that Custer County is the tenth fastest growing County in the Nation and that there alot of people that would be affected by this, new + old! The facts are very clear the destruction of life that ~~by~~ sudden loud noises in a quiet natural setting would have if approved!

Let's be sensible and just trash the Airspace Initiative!

R Trujillo

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Please hand this form to the staff, drop into the collection box, or mail to:

Program Manager, CAI EIS
Environmental Division
Air National Guard Readiness Center/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

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Response to Comment No.2

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

1330 Timber Ln
Boulder, Co 80304
May 21, 1995

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Ave
Andrews AFB, MD 20762-5157

Not quite two years ago, my husband and I bought three contiguous 35-acre lots in a quiet wooded area near Westcliffe, Co. Last month we started building a dream house in the center of the middle lot. We wanted to insure that we were as insulated as possible from any noise other than that of the birds and animals that lived in that woods. 1

Imagine our dismay when we just learned that the quiet air above this tranquil acreage may soon be disturbed by noisy aircraft. I want to object to the Colorado Airspace Initiative. 2

This airspace was not for sale; if it had been, I would have paid to insure that it would remain in its' natural quiet state. I would like to see the elimination of Airburst MOA, La Veta MOA and all MTRs leading to the Airburst Range. 3

I consider myself part of the large group of Americans who takes pride in the US Air Force and consider it to be the best in the world. I don't think the Colorado Airspace Initiative is needed to maintain that status. 4

Sincerely,
Judy Tupy

118L Judy Tupy

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Response to Comment No.3

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

Response to Comment No.4

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

SHIPPED MAY 2 2 1996

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THIS PLAN IS NOT GOOD FOR THE STATE OF COLORADO.

1

CAPTAIN'
737-300

Capt. R.M. BALLARD
R.M. Ballard
981 PARKWAY Dr
Boulder Co. 80303

RESPONSES TO COMMENTS

Response to Comment No. 1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

401

Ennis Comments
DEIS Colorado Airspace Initiative
June 28, 1996

Public Comments
May 22, 1996

Re: Draft Environmental Impact Statement for the Colorado Airspace Initiative

Prepared by: Glenn Ennis, Private Citizen
5467 Blackhawk Road
Boulder, CO 80303-4009

Ladies and Gentlemen:

My purpose today is to make three (3) recommendations that will help the Colorado Air National Guard regain the trust and confidence of the citizens whose liberty they are sworn to protect. These recommendations will also assist the Guard in finalizing the Environmental Impact Statement.

To anyone who thinks that there is no crisis in confidence on this project, I would simply say, "Go look at the record of the public hearings conducted in Alamosa on May 14, 1996 and in Westcliffe on May 16". Consider that a Congressional investigation into the handling of this EIS has been demanded by business owners in Crestone and Moffat. Comments ran about ten-to-one against this project in Alamosa, despite the fact that many people had to drive nearly 100 miles round-trip to attend the hearing. 1

Why are people so angry? First, because the Guard has consistently failed to enforce its own flight rules. Many people in the San Luis Valley, for instance, feel that it makes little difference where Military Training Route (MTR)-413 is located because hot-dog pilots who violate the altitude and horizontal boundaries of the MTR are not punished nor publicly reprimanded. **Horror stories abound!** Credible witnesses and children in Moffat have looked on in horror as fighter pilots conduct mock strafing runs on their schoolhouse! Automobile drivers have been shaken off the road as low-flying jets roar over them at 600 miles per hour. You too would be angry if this happened to you and to your children. You need not take my word as to these events; they are part of the legal record in Alamosa. 2

Recommendation One is that strict enforcement of MTR and MOA boundaries must be included in the EIS as a mitigation measure. While everyone recognizes that these are training routes and that errors will sometimes occur, there is no excuse for hot-dogging. Pilots who engage in such reckless flying should, at a minimum, be prohibited from flying in Colorado. Tough sanctions must be enforced and be publicized if the Guard hopes to regain the trust and confidence of citizens in the overflight areas.

Why are people so angry, Part 2: Numerous expert volunteers gave of their own time and effort to develop an Alternative Proposal for this EIS. These volunteers, known as the Colorado Airspace Initiative Working Group, met the Guard's deadline for the submittal of its Alternative. That was in May of 1994, yet that Alternative has never been analyzed in its entirety. Rather, this negotiated Alternative has been characterized as being merely "recommendations" and has then been "cherry-picked" so that only those bits and pieces found to be to the liking of the Guard have been analyzed. By doing so, both the Governor's office and the Guard have violated the trust of the members of the Working Group. Again, in public testimony in Alamosa, members used words like "betrayed" to describe how they feel today. The people of the Front Range and **the taxpayers and voters of Colorado** must understand that the voices being raised in protest are not simply those of a few malcontents. No, they are voices of honest and sincere professionals, and include many prominent members of the affected communities. 3

Recommendation Two is that the Colorado Airspace Initiative Working Group be revitalized. The Alternative that was developed in May, 1994, with minor updates if needed, should be analyzed in its entirety. To fail to do so is not only a breach of trust, it legally jeopardizes the final EIS. The three existing Alternatives are narrow in scope and do not represent a true spectrum of alternative actions. NEPA case law requires that a sufficiently broad range of Alternatives be considered.

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

The ANG takes the public's concerns about pilot accountability very seriously. Any misconduct by a military pilot is a serious matter. If a member of the public is experiencing any problems with the military's operations in any of the airspace in an area that affects a person directly, the public affairs officer at the nearest military installation should be contacted immediately, or call (800) 582-8507.

The Federal Aviation Administration and each military service have very strict rules to ensure pilots stay within defined training airspace. The rules govern minimum altitudes, maximum speed, and type maneuvers that can be performed inside and outside designated training airspace. Military commanders have the authority to suspend pilots who willfully violate flight rules, such as flying outside designated training airspace. The military closely manages the airspace they use to ensure they do not exceed planned parameters.

Response to Comment No.3

The recommendations from the Working Group, presented in Appendix F, were used to develop the Preferred Alternative. Many of the airspace recommendations included in the Working Group Alternative were incorporated verbatim into the Preferred Alternative and significant portions of the other recommendations also were adopted into the alternative. As such, these recommendations are consequently evaluated in the EIS. The airspace configuration components not adopted were only eliminated after air traffic or environmental conflicts were identified that made their inclusion not feasible. The proposed configuration of military airspace and the route structure were then coordinated with Federal Aviation Administration representatives and is based on its ability to meet existing U.S. Air Force training requirements. The configuration of military airspace for the alternatives considered, including the Preferred Alternative, was derived in part by available unobligated airspace and was designed to avoid airports, instrument approaches, major airways, and known environmentally sensitive areas. The Working Group Alternative has played a very prominent role in the formation of the Preferred Alternative addressed in the EIS.

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Ennis Comments
DEIS Colorado Airspace Initiative
June 28, 1996

Before I go further, I should say a word about my own background. I've lived in Colorado for 21 years and I ran my first environmental project 26 years ago. More importantly, I've worked as an environmental professional fully dedicated to improved safety and environmental compliance at federal facilities. I wrote sections of the new environmental impact statement for Rocky Flats. I've been trained in risk assessment at the Harvard School of Public Health. I've commented to the FAA as a professional reviewer. And I've reviewed aircraft crash probabilities and other hazards as part of my work for the Los Alamos National Laboratory. It is with this background that I made the previous two recommendations and that I now turn my attention to the technical inadequacies of this draft.

Noise: **The noise analysis presented in this document is fatally flawed in that the mathematical representations fail to accurately describe the threat.** This is the cardinal sin of risk analysis! Though mathematical manipulations of the energy content of noise may be useful in certain contexts, this draft EIS loses sight of the fact that we are talking about multiple acute impacts. That is, multiple short-term impacts are misconstrued as equivalent to chronic, long-term, low-level impacts. This is akin to saying, "Stick your head in a blast furnace for an hour. At 5,000 degrees , averaged over a one-year period, this will feel like less than a one degree increase in temperature. And we all agree that's no problem." Well, that is a problem, and I invite any consultant who thinks otherwise to seek out his local blast furnace and try this little experiment. Yet, the draft EIS would have us embrace the noise of low-flying jets and lead us to believe that the averaged noise-level increases will only be equivalent to so many birds chirping. This is utter nonsense. Residents of the overflight areas have sufficient common sense to recognize this flaw; I am merely restating the same concern in more technical language. — 4

Sortie Counts: **The use of sortie counts systematically understates the impacts of the Preferred Alternative and all other Alternatives.** Impacts, whether they be noise, air quality, or economic are generated by the number of flybys, not the number of sorties. At one time, sortie counts may have been a reasonable surrogate for actual flyby counts, but that is all changed by the capability of the modernized F-16 to refuel while it is in the air. There is no reason to think that a commander would not refuel his force while in an MOA and then proceed to fly additional training routes and engage in additional maneuvers. Indeed, one would *expect* that this would occur because F-16 modernization is one of the two changes used to provide the legal rationale that supports the stated purpose and need of this Draft EIS. It is not appropriate to ignore flyby counts in favor of sortie counts because the number of flybys per sortie will vary from MOA to MOA, from MTR to MTR, and by Alternative. Therefore, the impact analysis sections of this draft document must be revised and recalculated based on flyby counts. Because of F-16 modernization, there is no longer any accurate impact analysis based on sortie counts alone. — 5,6,7

Incomplete Impact Analysis: On the very first page of the Executive Summary, page v, the DEIS acknowledges that "other Department of Defense aircraft would also use the proposed airspace on an infrequent basis." Yet Table S-2 summarizes "Identified Aircraft". **Are the unidentified aircraft classified operations?** If so, a classified appendix to this document must be prepared. Although the details cannot be made available to the public, the impacts of the operations must still be analyzed. — 8

Recommendation Three is that the analytical methods used to evaluate the impacts of the various Alternatives must be subjected to intense and impartial review. Given that the list of reviewers presented in Section 5.2 of the DEIS includes committees from both the National Guard and the Air Force, I see no choice but to recommend that an independent oversight review board be convened.

In conclusion, **there are many shortcomings of this document**, so many that they cannot even be enumerated here. Tonight, I have tried to offer constructive recommendations to fix both the problems of failed trust with the electorate and to address some of the technical flaws of this EIS so that, in the end, we can reach the common goal of strong national defense and respect for our own citizens. — 9

Thank you very much.

RESPONSES TO COMMENTS

Response to Comment No.4

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

Response to Comment No.5

Under the Preferred Alternative, the maximum number of sorties for the Colorado Airspace Initiative would decrease from 5,441 sorties to 4,909 sorties per year.

Response to Comment No.6

Sortie numbers are an excellent means to determine potential overflights. MTRs are one-way traffic routes so an aircraft can pass over a single location only one time on one sortie. MOAs do allow an opportunity for multi-directional traffic; however, training objectives to vary the pilot's experiences during the sortie and fuel limitations of the aircraft would make repeat identical passes over one ground location an undesirable and unlikely training scenario.

Response to Comment No.7

The number of flying hours assigned to a unit is determined by the amount of funding that a unit receives. In general, in-flight refueling activities associated with the Colorado Airspace Initiative are not performed to extend the duration of an individual sortie so an aircraft can stay in one location for an extended period or increase the amount of flying hours for a unit, but are performed for training purposes within the budget limitations of the unit. In-flight refueling training is essential for pilots to acquire the skill to use this procedure.

Response to Comment No.8

All known users of the proposed Colorado Airspace Initiative training airspace have been identified in the document (see Appendix N). No additional aircraft will be permitted to use the proposed or existing training airspace without supplemental environmental analysis.

Response to Comment No.9

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Wed May 22 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

To whom it may concern:

I believe that the Draft Environmental Impact Statement for the expansion of MOA's in Colorado are biased. Low-flying fighter jets roaring at 100-plus decibels is hardly something that could be deemed to have no significant impact. Even if they do not occur all day. Commercial flights over Rocky Mountain National Park were rejected for just this reason. I am also suspicious of the need for the National Gaurd to conduct so many training exercises, especially in a time of reduced tensions with other countries. Colorado does not need to be a war game playground for Gaurd units from all over the country. I advocate the rejection of the proposed expansion. 1 2

Sincerely,

Adam Fedor

Adam Fedor
745 S 42nd
Boulder, CO 80303

404

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

Training for potential military conflict in time of peace is a reality recognized by the Congress and the President. As military forces are cut back, the quality of training for existing forces must be maintained and improved to ensure our nation has an effective military. As the active duty military force is reduced in size, the ANG role and the role of the 140 WG in the total force structure is increasing. Over the past several years, the DOD has conducted studies to evaluate mission readiness and cost effectiveness of its total force. In comparison to DOD regular components, the ANG has relatively low operating costs and provides a cost effective investment.

405

Betsy & David Host
3877 County Rd. 182
Westcliffe, CO 81252
May 22, 1996

Program Manager, CAI-EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

Dear Sir:

We are sending this letter to strongly protest the Airburst MOA, La Veta MOA and all MTRs leading to the Airburst Range.

I (Betsy) went to high school in Westcliffe in the 70's and we have had a cabin there since I was very small. Now, my husband and children and I are moving there permanently.

There is absolutely no way you can compare decibel levels over a 24-hour period in the Wet Mountain Valley with decibel levels in a city. During the day, it is very quiet anyway, but at night, it is almost silent. We spent a week there last summer and were amazed by how quiet it was.

When a military jet flies through, creating a sonic boom, etc., it is very startling for both man and beast. And if this were to happen at night, everyone would be wakened. There is no justification for inflicting this on the residents and vacationers of the area; not to mention the livestock. 1,2

As a safety concern; if there were ever a crash, resulting in a fire, there would be a devastating forest fire. The county doesn't have much equipment and it takes precious time for volunteers to get to fire sites. Even under the best of circumstances, the roads could be impassable and the worst case scenarios include no road at all. This is generally a very dry area in the summer and there are many homes in the woods. 3

People come to this area not only for the beauty, but for the peace and quiet.

We are not a community of wealthy, powerful people so we can't fight you with money and lawyers. You should do the right thing because it is right and just and ethical not to impose your will on us. 4

The CAI-DEIS is skewed because it is comparing apples and oranges (city and country). We urge you to cancel plans to fly MOAs and MTRs over our valley and disturb our way of life. The quality of life would be changed for the worse forever if these plans are carried through. 5

Most Sincerely,

Betsy Taylor Host

Betsy Taylor Host

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Response to Comment No.3

The fire potential associated with aircraft overflights is generated from the potential for an aircraft crash or the use of flares in training. The EIS evaluated the potential for an aircraft crash resulting from the proposal. This evaluation determined that the likelihood of an aircraft crash would be very low. Therefore, the potential for a fire resulting from an aircraft crash would also be very low. In fact, military accidents have declined in the past decade, as described in the February 1996 report of the General Accounting Office, an organization under the U.S. Congress.

Authorized users of the airspace have proposed the continued use of flares in their training. However, the flares would not be released below 2,000 feet AGL. Once a flare is released, it ignites immediately. The burn time for a flare is approximately 4.0 to 4.5 seconds. In those 4.0 to 4.5 seconds, the flare falls approximately 500 feet. This leaves a safety margin of approximately 1,500 feet to allow for a flare that burns for more than 4.5 seconds to extinguish itself. The 140 WG has no knowledge of any fires being caused by flares released during current training missions by any aircraft utilizing Colorado Airspace Initiative airspace.

Response to Comment No.4

There would be some changes in sortie numbers, noise levels, and airspace dimensions under the Original Proposal and the Preferred Alternative addressed in the EIS. However, overall flying hours of the 140 WG will be reduced from 5005 hours to 4600 hours. When compared to existing military aircraft training in the study area, these changes would not change the current levels of solitude and peace and quiet experienced by residents. As under current conditions, noise from military aircraft operations may periodically disturb citizens and affect their enjoyment of solitude; however, opportunities for abundant periods of total peace and quiet would continue as under present conditions.

Response to Comment No.5

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

XAVIER E. SANDOVAL
DISTRICT #3

WILLIAM REINERS CHAIRMAN
DISTRICT #1

NEAL J. COCCO
DISTRICT #2



HUERFANO COUNTY BOARD OF COUNTY COMMISSIONERS
401 MAIN STREET
WALSENBURG, COLORADO 81089

PHONE 719-738-2370

FAX 719-738-3996

Air National Guard Readiness Center/CEVP
Program Manager CAI EIS
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

May 22, 1996

Dear Program Manager:

The Huerfano County Board of County Commisioners feels compelled to restate our disappointment over the Air National Guard's decision not to schedule a Public Meeting in Huerfano County in regard to the impact of the Colorado Airspace Initiative. The La Veta MOA contains more area in Huerfano County than any other county! Problems have been identified with the existing La Veta MOA at both the scoping and information meetings held in Huerfano County. Yet, our request for a public meeting to be held in Huerfano County concerning the Draft Environmental Impact Statement (DEIS) for the Colorado Airspace Initiative continues to be denied. 1

This Board hereby voices our concerns that the methodology used to reach the conclusions contained in the DEIS appears to be flawed based on a preponderance of testimony given at the public meeting held in Westcliffe, Colorado on May 16, 1996. We further believe there is, and will continue to be, a significant adverse effect on the environment within the La Veta MOA. 2

Sincerely,
BOARD OF COUNTY COMMISSIONERS
OF HUERFANO COUNTY, COLORADO

BY
William Reiners, Chairman

Xavier E. Sandoval, Commissioner

Neal J. Cocco, Commissioner

407

RESPONSES TO COMMENTS

Response to Comment No.1

The hearing locations were selected to ensure the inclusion of a wide geographic representation of potentially interested parties within the affected areas to ensure maximum participation. The availability of meeting rooms with the requisite facilities, that could be reserved on the dates required, also was a significant factor in the selection process. Input from the Citizens Working Group and its members was also considered. These factors were considered more significant than selecting a site primarily on the basis that it might be directly under an airspace.

Response to Comment No.2

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Bernard Marek and Einor Nygren
4690 Berkshire Place, Boulder, co.

SHIPPED MAY 22 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Av.
Andrews Airforce Base, MD 20762-5157

To whom it May concern

My wife and I are frequent travelers to south central Colorado. So much of this area is pristine wilderness, a place where we vacation and find solitude. It is also a place where I engage in per sonal silent spiritual retreats. 1

I wish to inform you that the plan to permit the Air National Guard to engage in low altitude training over this geographic area is abhorent and unconscionable. The Guard's plan will in my view violate the private property rights of many. Futhermore it will pose a threat to the environment, livestock, and wildlife of this area. I have reviewed the Draft Environmental Impact Statement and find it to be extremely erronious and misleading. 2,3

Because this part of Colorado is sparsely populated and considered "moderately useful" is unjustifiable regarding the intended use by the Air National Guard. The cold war is over. It is time to make peace with ourselves. There is no major threat to the security of our land. 4

I OBJECT AND STRONGLY ENCOURAGE YOU TO DISALLOW THE AIR NATIONAL GUARDS PLAN TO EXPAND AIRBURST AND LA VETA MOA'S FROM BEING IMPLIMENTED.

Sincerely

Bernard Marek

Elinor Nygren

cc: Custer County Action Assn
Wilderness Co.

408

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

It is possible that aircraft noise could startle domestic animals, especially young or penned animals, and cause them to injure themselves. However, animals adapt and habituate to various sound sources, including jet aircraft noise. Because the airspaces associated with the CAI are mostly existing airspace that have been utilized for over 25 years, this adaptation and habituation to jet aircraft noise has likely already occurred.

Response to Comment No.3

Studies conducted on wildlife have shown that numerous wildlife species have the ability to adapt to the presence of man and various man-made sound sources, including jet aircraft noise. While the noise generated from low-altitude military overflights may be initially startling, habituation to jet aircraft noise occurs with most wildlife species. Species-specific responses to low-altitude overflights vary considerably, and responses from individual animals may have the potential to cause injury. However, wildlife populations are usually affected only when a variety of factors work in combination to impact them, including declines or fluctuations in the availability of a food source, habitat destruction or alteration, predation, hunting, trapping, poaching, disease, or inclement weather, rather than noise alone. Normally, it would be unrealistic to predict or attribute any wildlife population declines to a single stressor, such as noise. In addition, no published scientific evidence was identified that indicated harm may occur to wildlife as a result of exposure to the levels of noise generated by military aircraft that would utilize the airspace associated with the Colorado Airspace Initiative.

Response to Comment No.4

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

ROBERT B. McFARLAND, M.D.
Internal Medicine
2300 KALMIA STREET
BOULDER, COLORADO 80304
Telephone 443-8585

May 22, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762

Dear Sir,

I'm concerned that the Air National Guard wants to expand its airspace for training in southern Colorado.

I was in the Naval Reserve for twenty years and I think I appreciate the need for training of reservists. However I believe the ongoing reduction in forces, both active and reserve, requires less airspace and other facilities, rather than more. 1

I learned of this controvesy through advertisements in our newspaper in Boulder, That indicates there is a high level of opposition to the planned expansion and public opinion has to be carefully considered in the future. support of our military forces. 2

Robert B McFarland

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RESPONSES TO COMMENTS

Response to Comment No.1

Training for potential military conflict in time of peace is a reality recognized by the Congress and the President. As military forces are cut back, the quality of training for existing forces must be maintained and improved to ensure our nation has an effective military. As the active duty military force is reduced in size, the ANG role and the role of the 140 WG in the total force structure is increasing. Over the past several years, the DOD has conducted studies to evaluate mission readiness and cost effectiveness of its total force. In comparison to DOD regular components, the ANG has relatively low operating costs and provides a cost effective investment.

Response to Comment No.2

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Program Manager, CAI EIS
Environmental Division
Environmental Planning and Air Space Branch
Air National Guard CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

SHIPPED MAY 2 2 1996

Dear Program Manager,

Please be aware of my objection to the **Colorado Air Space Initiative.**

I have many concerns, (specifically with IR-409, IR-415, VR-412 and VR-413) with the MOAS:

1). Current level continuation and/or increasing military jet sorties over pristine Colorado at a time of "government cut backs" appears an unwise budget decision, especially, as the 140th Fighter Wing is facing a reduction in authorized air craft/flight billets (30% or higher). 1

2). Colorado's tourism based economy cannot profit from increased noise and intrusion into our wild and scenic areas which attract visitors with the solitude and beauty our mountains offer. 2

3). The Air National Guard planners claim a 40% reduction in NAG training space due to DIA's airspace. Custer County Action Association estimates a 4% loss. 3

4). Bighorn sheep lambing and elk calving areas exist in the proposed MOAS. Endangered species such as the Bald Eagle, Mexican Spotted Owl, Plains Sharp Tail Grouse and Peregrine Falcon, are known to nest in the MOAS. The NAG DEIS claims "No adverse impacts expected." This speculation cannot be taken seriously! Adverse stress and mortality on indigenous wildlife can be expected: 4

A). With aircraft elevations at 100 to 300 feet above ground level, bird collisions are bound to occur. These birds airspace is not limited to their nesting sits. 5

B). Many studies concerning adverse impacts on animals be unscheduled noise events have shown conclusively that animals are stressed and traumatized. One recent study by Canadian Biologist Steve D. Coté from the University of Biology, found the following: Helicopter disturbances altering behavior and feeding patterns in bighorn sheep and mountain goats. Recommendations from the study suggested minimum helicopter distances from sheep at 500 meters and 2 kilometers for goats. It would follow that a more obtrusive aircraft, such as a F-111 or F-16, would require greater distances. 6

5). Circumstantial damage from concentrated jet exhaust pollutants in previously non-polluted air environment would obviously lower the air quality. 7

6). FAA estimates property values decrease 1% with each decibel of air traffic noise level increase. So, am I assume my property values will decrease 10 to 14% ? It's interesting to note that recent reduction of Colorado ANG flying activity coincided with huge growth in Custer County. In a 5 year reduced flying period, Custer County experienced one of the biggest proportional population gains in the U.S. The NAG sortie reduction had to be one of the contributing factors in making that area more desirable. 8, 9, 10

410

126L Louis E. Narwou

RESPONSES TO COMMENTS

Response to Comment No.1

Training for potential military conflict in time of peace is a reality recognized by the Congress and the President. As military forces are cut back, the quality of training for existing forces must be maintained and improved to ensure our nation has an effective military. As the active duty military force is reduced in size, the ANG role and the role of the 140 WG in the total force structure is increasing. Over the past several years, the DOD has conducted studies to evaluate mission readiness and cost effectiveness of its total force. In comparison to DOD regular components, the ANG has relatively low operating costs and provides a cost effective investment.

Response to Comment No.2

The role of tourism in the local economy, and its impact from the alternatives associated with the CAI, have been studied in the EIS as a part of the evaluation of socioeconomic impacts. There are a number of factors, other than aircraft operations, that may affect tourism and the use of recreational areas, including weather, the proximity of other attractions in the area, and the economy. While it is possible that a tourist visiting an area may find an aircraft overflight to be annoying, no significant change to the tourist industry would be expected considering the fact that the majority of the CAI airspace has existed for many years and the relevant influences from military aircraft operations are not changing in the study area. The contribution of tourism earnings to total industry earnings was presented in the EIS for each airspace. In all instances, these values were very consistent with overall state levels of tourism earnings as compared to industry earnings.

Response to Comment No.3

The opening of the Denver International Airport resulted in the loss of approximately 40 percent of the New Raymer MOA and air traffic control assigned airspace. The impact on the existing Kit Carson MOA, combined with changes proposed under the CAI Preferred Alternative, would result in an overall decrease in the total military training airspace available.

RESPONSES TO COMMENTS

Response to Comment No.4

The ANG has been and will continue to work with the U.S. Fish and Wildlife Service, the Colorado Department of Natural Resources, the Bureau of Land Management, and other regulatory agencies to study the effects of their actions on threatened and endangered species within the areas affected by its operations. Representatives from these organizations meet periodically in a Coordination Group to discuss and study species of concern. Some ongoing study activities are currently funded by the ANG, including a study with the U.S. Forest Service on the Mexican Spotted Owl. The ANG will continue this cooperative effort and adjust its operations should any of these studies identify potential impacts on any threatened or endangered species.

Response to Comment No.5

Because of the potential for loss of a pilot's life and the high cost of modern military aircraft, avoidance of collisions with birds is extremely important to the ANG. The potential for a bird-aircraft strike would not change significantly under the proposal. Both the Original Proposal Alternative and the Preferred Alternative consist largely of modifications to existing airspace or establishments of new airspace in the vicinity of existing airspace. These actions would, therefore, encompass the same seasonally adjusted bird avoidance procedures associated with the bird migration corridors as are utilized currently with the existing airspace. Due to the fact that only four bird strikes have occurred in existing airspace associated with the Colorado Airspace Initiative in the past five years, the likelihood of future bird-aircraft strikes under any of the alternatives would be expected to be low.

The USAF has established a Bird/Aircraft Strike Hazard (BASH) Team to implement procedures to prevent and reduce the threat of bird/aircraft strikes, and to investigate and track any bird strikes that occur. In addition, each USAF/ANG base or flying unit is required to establish a BASH program to minimize the risk of bird strikes both at the base airfield and in airspace training routes for the unit. The USAF BASH Team assists each base or flying unit by providing Bird Avoidance Model (BAM) graphs. These graphs estimate the relative bird strike risk for flying along a specific low-level route or operations area. The model is developed on the basis of waterfowl and raptor migration and concentration data. The BAM graph depicts the severity of the bird strike hazard at a particular time of day, month, and segment of a low-level route. This information is used by the flying unit to determine the optimum route schedule and avoidance measures to be taken to prevent bird/aircraft strikes. In addition, the unit publishes Notices to Airmen (NOTAM) to alert transient aircrews to specific bird migration hazards, activity periods, and avoidance procedures.

RESPONSES TO COMMENTS

Response to Comment No.6

Studies conducted on wildlife have shown that numerous wildlife species have the ability to adapt to the presence of man and various man-made sound sources, including jet aircraft noise. While the noise generated from low-altitude military overflights may be initially startling, habituation to jet aircraft noise occurs with most wildlife species. Species-specific responses to low-altitude overflights vary considerably, and responses from individual animals may have the potential to cause injury. However, wildlife populations are usually affected only when a variety of factors work in combination to impact them, including declines or fluctuations in the availability of a food source, habitat destruction or alteration, predation, hunting, trapping, poaching, disease, or inclement weather, rather than noise alone. Normally, it would be unrealistic to predict or attribute any wildlife population declines to a single stressor, such as noise. In addition, no published scientific evidence was identified that indicated harm may occur to wildlife as a result of exposure to the levels of noise generated by military aircraft that would utilize the airspace associated with the Colorado Airspace Initiative.

Response to Comment No.7

The EIS evaluated aircraft air pollution resulting from each of the alternatives studied in the EIS using scientifically validated emissions modeling tools designed to predict ground-level pollutant concentrations. The total air pollution emissions from the 140 WG would be reduced under the Preferred Alternative and the Original Proposal as compared to existing conditions, because the total number of flying hours would be reduced from 5005 to 4600 hours. The cumulative air pollution concentrations, as determined through computer modeling for each of the airspace segments, could increase or decrease depending upon a variety of factors. These factors include the type of aircraft using the airspace, their altitude, frequency, power setting and meteorological conditions rather than a strict proportional relationship to the number of sorties flown. Nonetheless, under the worst case scenario modeled for each airspace segment under each of the alternatives, no air pollution concentrations resulting from aircraft operations would cause any local area to be out of compliance with Federal or state standards or make any significant impact on air quality in any area. Also, when comparing these air pollution concentrations with Federal and state limits for the Prevention of Significant Deterioration (PSD) in air quality, all levels were far below minimums.

Response to Comment No.8

In order to address concerns regarding possible devaluation of real estate, the EIS evaluated historical data for property values. This analysis compares counties within the study area for the CAI, including those areas with currently utilized military airspace, to counties outside the study area. The results indicate that all counties experienced increases in property values. Further, in terms of median property values, counties within the study area for the CAI increased 99.71 percent compared to counties outside the study area, which increased 57.74 percent. Whereas a report published by the Federal Aviation Administration concludes "that noise has been shown to decrease the value of property by only a small amount--approximately 1 percent decrease per decibel (DNL)," this analysis applies to airport/airfield environments and not land areas underlying military training airspace. Therefore, although it is not possible to absolutely conclude that counties experiencing military aircraft overflights incur any greater change in real estate values than counties not experiencing similar overflight activity, it is not likely that real estate values would drop as a result of the CAI.

Response to Comment No.9

Data regarding property values for Huerfano and Custer Counties was presented in Subsections 4.9.4 and 4.9.8 of this EIS.

Response to Comment No.10

Since 1970, many Colorado counties, including Custer County, have experienced an increase in total population, the number of housing units, property values, and the general local economy. Because many factors contribute to socioeconomic conditions and no absolute link between aircraft overflights and economic changes can be determined, it is not possible to conclude that an increase (or decrease) in building activity is directly attributable to a change in the number of sorties flown. Custer County appears to have experienced growth during periods of high and low aircraft activity levels. A review of socioeconomic conditions across the entire CAI study area does not reveal widespread, repetitive, or consistent patterns. For example, while some counties may have experienced an increase in population, housing, and employment, other counties may have experienced a decrease in these conditions. Additionally, some counties may have experienced a combination of growth in population and housing but a decline in local economic conditions.

7). Low altitude flight training appears to be ineffective for present and future air combat situations. All evidence supports low altitude flight no longer avoids detection and low altitude tactics are undesirable with the existing anti-aircraft weapons of our possible enemies. Air to surface aircraft attacks attacks in the Gulf War were from medium to high altitudes. The Pentagon's Report to Congress on the Gulf War acknowledged that low altitude tactics weren't used in the War. I refuse to allow the quality of southern Colorado to deteriorate because some pilots want to have fun! 11

If the military powers that be, insist on continuing this absurd pursuit of airspace and flight training they should:1. consider Pinyon Canyon as their primary MOA. Pinyon Canyon use appears to have less impact on population, economics and wildlife. The area is owned in large, by the U.S. Army. 2. Obtain and utilize F-16 flight simulator time at Buckley. Savings on fuel, and maintenance should offset the simulator expense. 12 13

I strongly oppose the Colorado Airspace Initiative, and any attempt to increase low altitude military flights anywhere in the southern Colorado front range and wilderness areas.

Thank you for your time,

Sincerely

Louis E. Narwou

RESPONSES TO COMMENTS

Response to Comment No.11

Low-altitude flights allow pilots to learn to avoid detection and to survive in combat. Low-altitude flying provides a significant operational procedure through which detection can be minimized. Training is essential to acquire the skill to use this procedure. Specific combat conditions that allowed high-altitude operations in the Gulf War may not exist in future conflicts. The need for this training is required by Air Force training regulations.

Response to Comment No.12

Pinon Canyon MOA, because of Army use, restrictive altitude structure, and relatively small size, limits the types and amount of training that could be accomplished. In discussions with FAA to increase the physical dimensions of Pinon Canyon MOA, they indicated, because of a civilian airway for general aviation aircraft, the current size could not be expanded.

Response to Comment No.13

The use of flight simulators for pilot training is already part of the training program for various aircraft using the affected airspace. The F-16 training regulation (AFI 11-F16) stipulates those activities that may be accomplished using simulators and those requiring actual flying. Although flight simulators work well for certain types of training (e.g., emergency procedures and instrument training), the complete substitution of simulator training for all flight training is not a viable alternative. In addition, the availability of simulators for on-going readiness training is limited and not currently at the 140 WG.

5-22-96

Dear Program Manager, CAI EIS
We are writting this letter in
regards to the proposed MOA over
our pristine mountain property.
After reveiwing the Colorado
Airspace Initiative - Draft
Environmental Impact statement
we must insist on the complete
elimination of Airburst MOA,
La Veta MOA and all MTR's
leading to the Airburst Range!!
OEIS noise analysis must be
based upon each & every fly over,
rather than upon Day-Night
averaging, to gain a true feeling
for the impact that 40 flights
each day would leave upon our
once peaceful mountain property.
Such loud bursts of noise would
not only affect wildlife habitat
it would affect the quality
of our retirement habitat.

Sincerely Yours,
David & Phipps.
Georgia Francis-Phipps
-Dilley Ranch-

cc: Legislative Babies

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RESPONSES TO COMMENTS

Response to Comment No.1

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

Response to Comment No.2

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

Response to Comment No.3

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Response to Comment No.4

Many citizens have expressed concern that their quality of life, which is based directly on the kind of lifestyle that they can enjoy while residing in or visiting the State of Colorado, will be changed by implementation of the CAI. The U.S. Air Force, including the ANG, has been conducting military aircraft operations in the Wet Mountain Valley and the San Luis Valley areas where people are most concerned for approximately 25 years. Most of the military airspace proposed under any of the alternatives is currently in use. Commercial aircraft overflights have also been taking place and will continue to do so. Citizens may notice changes in military aircraft overflights in certain areas associated with the CAI. The number of sorties are proposed to increase moderately in portions of the study area and decrease in others. Overall sorties will be reduced from 5,441 to 4,909 under the Preferred Alternative. The bottom altitudes of several airspaces where citizens are most concerned have been raised to reduce noise levels. Therefore, existing quality of life should not be changed.

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May 22, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

Dear Sir:

Last November, my husband and I purchased 35 acres with a house in Custer County, Colorado. We purchased this property with intention of moving to it when we retire and possibly adding to it when and if oppurtunity arises. The price was high and a little more than we really should have gone in for at this time, but it was just what we had been looking for. It is close enough to town to go shopping and do business when you need to, but far enough out in the country to have privacy and peace and quiet. It's right at the base of the mountains, with an abundance of wildlife.The other people living in the area are farmers and ordinary working folks with families. It seemed perfect. 1

But now, we find out about the Colorado Airspace Initiative. Imagine our dismay at finding out that there may soon be a steady stream of noisey air traffic right over our new dream home. The peace and quiet we paid so much for will be destroyed. If we decide to just sell out and try to find another place, we won't be able to get all our money back out of it. We're very upset and so are the other land owners in the area who have just as much or more invested in their property as we have. Please don't turn our valley into a disaster. 2

Thank-you,
Connie Schmidt
HCR 71, Box 197
Ava, Mo. 65608

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

5/22/92

GORDON & SHIRLEY SEWELL
66 Sewell Road
Westcliffe, CO 81252

Program Manager
To Whom It May Concern

What the National Guard is doing to me when you are using my house as a target, flying over it at tree top level:

1. You are harassing me, shaking my house and making loud noise.
2. You are endangering my life.
3. You are violating my constitutional right for the pursuit of happiness.
4. I live in the mountains for peace and quiet and to get away from city noise. Now you want to destroy it.
5. On April 20th two of your C130 planes flew over my house while I was sleeping and it brought me straight up, shaking the house. This definitely has a significant impact on me and I want it stopped.

On May 16th I went to a National Guard meeting in Westcliffe, Co. on the Environmental Impact Statement. The whole thing is a farce.

The statement on video by your spokeswoman stating you have been

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RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

doing this for 20 years is in out and out lie. I have lived here since 1949 and it has only been the last 4 or 5 years that your planes have been coming over my place at tree top level and only once in a while

2

Sincerely
Gordon Sewell

4
20

5/22/96

GORDON & SHIRLEY SEWELL
66 Sewell Road
Westcliffe, CO 81252

421

Program Manager

To Whom It May Concern:

This letter is in response to the recently published Draft Environmental Impact ~~Statement~~ prepared for the Air National Guard for the Colorado Airspace Initiative.

This statement is so full of lies, ambiguity and innuendo it would be difficult for a "Philadelphia Lawyer" to read and understand. The noise factors they use have no basis in fact with our situation here. The "startle" effect is horrendous. We have had C130's fly over our house at tree ~~top~~ level and the noise rattles the windows 1

The statement says the reasons for the need for this airspace is because of the new Denver airport. Hooray! They lost 10% of the Cheyenne M.O.A. and have reduced their operation by 50%. 2

We are supposed to have to listen and be disturbed by this noise, not only from our own planes, but also from a contingent of German planes. 3

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

The opening of the Denver International Airport resulted in the loss of approximately 40 percent of the New Raymer MOA and air traffic control assigned airspace. The impact on the existing Kit Carson MOA, combined with changes proposed under the CAI Preferred Alternative, would result in an overall decrease in the total military training airspace available.

Response to Comment No.3

Under the Preferred Alternative in the draft environmental impact statement, all low altitude flights (below 5,000 feet above ground level) will cease in the Wet Mountain Valley.

German Air Force (GAF) aircraft are not part of the Colorado Airspace Initiative (CAI) proposal. All potential users of CAI proposed training airspace are included in information given in Section 2, Section 4, Appendix E, or Appendix N of the Draft EIS. Any future use of CAI airspace, by GAF aircraft, would require appropriate environmental documentation.

Response to Comment No.4

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

The German planes are permanently based at Holoman AFB in New Mexico. They can't fly in their own country because of the noise.

Our concerns are for our health and safety. We not only don't want this MOA, we don't need it. -4

Sincerely yours
Shirley M. Sewell

Toni Vakos
P.O. Box 789
La Veta CO 81055
(719)742-3140

May 22, 1996

Program Manager, CAIEIS
Environmental Division
Air National Guard Readiness Center/CEVP
3500 Fetchet Ave.
Andrews AFB MD 20762-5157

Dear Sir/Madam,

I would like to comment on the Draft Environmental Impact Statement (DEIS) for the Colorado Airspace Initiative. I have read the Executive Summary of the DEIS, scanned the actual DEIS document, read Appendices G, H & I, read the response to the DEIS by Dale Ahlquist and attended the Public Hearing in Alamosa on May 14, 1996.

I am choosing to comment primarily on the noise survey information in the DEIS due to my 19 years of professional experience as an audiologist and my previous employment with the Environmental Protection Agency in the Noise Division including work on an EIS (Environmental Impact Statement) in the Boundary Waters Canoe Area in Minnesota.. However, I found this DEIS to be seriously flawed in so many other areas that have recently been addressed to your department in writing and in public comment that rather than enumerate on those areas here I refer you to the following references: 1.Dale Ahlquist - Director, National Airspace Coalition - "A Response to the Draft Environmental Impact Statement of the Colorado Airspace Initiative", 2.Dr. Lawrence F. Harris - Written Communication and Public Comment at the Alamosa Public Hearing May 14, 1996, 3. Robert Senderhauf - President Custer County Action Association - Written Communication dated May 9, 1996 and Public Comment at the Alamosa Public Hearing May 14, 1996 and 4. Kate Steichen - Open Space Alliance - Public Comment at the Alamosa Public Hearing May 14, 1996. 1

Specifically, in reference to the noise survey study in the DEIS:

1. The Day/Night Averaging Method for assessing noise is inappropriate for the both the area and type of noise being assessed. All references cited in Appendices G & H are to occupational noise exposure incurred in the work place or to urban aircraft noise related to airports, again totally inappropriate for the rural and wilderness areas involved in this DEIS. 2
2. Section G.2.4 regarding Speech Interference is especially ludicrous in reference to rural and wilderness areas. 3
3. Section G.2.7 Noise Effects on Structures states" While certain frequencies (such as 30 Hz for window breakage) may be of more concern than other frequencies...", "...at sound levels above 130dB, there is the possibility of the excitation of structural components resonances" and "...sounds lasting more than. one second above a sound level of 130dB are potentially damaging to structural components." . In the DEIS noise survey only a dBA weighted scale was used which would not have assessed frequencies as low as 30Hz. Also, all measurements were averaged over a day/night period when G.2.7 specifically states noise lasting one second can create damage. Clearly, an accurate assessment of noise effects on 4

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

Day-night average level is the most widely accepted measure of noise impact. It is applicable to rural as well as urban communities.

Response to Comment No.3

Speech interference is a direct impact of noise, and it is appropriate that this subject is addressed.

Response to Comment No.4

Comment noted. Sound pressure levels around 30 Hz will be well below the 130 dB threshold. This is now explicitly stated in the Final EIS.

Response to Comment No.5

Noise levels are shown to a distance of 25,000 feet.

Response to Comment No.6

Analysis of individual noise was based on levels which would become noticeable and potentially intrusive. The level of conversational speech is a good threshold for this. Ambient noise levels vary considerably from area to area, and from time to time, and cannot be used in a consistent manner.

Response to Comment No.7

Regulations prohibit aircraft flying within 500 feet of a person. Noise levels shown in Appendix I at distances of 500 feet or more are below the OSHA maximum of 115 dB. It should also be noted that the OSHA workplace maximum of 115 dB is allowable for up to 15 minutes each day. For exposures of a few seconds or less (typical for low-altitude, high-speed overflights), the maximum level of 124.3 dB (F-111F at 100 feet) would not adversely affect hearing.

Response to Comment No.8

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

structures was not done in this DEIS. G.2.7 specifically states "...assessments of noise exposure levels for compatible land use should also be protective of noise-induced secondary vibrations." Again, this was not accomplished in this DEIS. ***I specifically request that noise data information in the EIS be reported and analyzed in real time measurements and not averaged over a day/night period and that a dbC scale or actual SPL (sound pressure Level) measurement (as well as dBA) be applied to all data to include frequencies as low as 30Hz to accurately assess potential structural damage due to noise.***

4. A sound exposure level vs. lateral distance analysis was not performed to determine the potential number of people being affected by a single military flight.. ***I specifically request that a Sound Exposure Level vs. Lateral Distance analysis for 500ft, 1000ft. and 1500ft. for F16's, B1B's and F111's at levels down to 40 dB. be performed in the final EIS to determine the actual area of impact and population impact of a military flight noise event.*** -5

5. In speaking with Michael Lucas from Wyle Labs at the Public Hearing , I was told that the 65dB figure used in the noise analysis was arbitrarily picked based on the level of normal conversational speech. Again, I feel this is an inappropriate measure to use to assess noise in a wilderness area. Far better to use the actual ambient noise levels in the area which I was told were between 30-40dB.. Using a 65dB cutoff will inaccurately skew the data in terms of determining the number of noise events as refered to in the "Executive Summary of the DEIS' Tables S4-S17.. ***I request that all noise data in EIS be recalculated using the actual ambient noise levels of the area rather than the arbitrary 65dB figure.*** -6

6. Section G.2.1 Hearing Loss does not take into account sudden hearing losses that can occur from short term specific acoustic trauma (i.e. firecracker blast, explosion, single gunshot etc.). Sound exposure levels for specific planes listed in appendix I Tables 4-16 far exceed even OSHA's (Occupational Safety and Health Agency) requirements for unprotected listening in the work environment and are well within the range to cause potential sudden hearing loss.

7. Section G.2.6 Noise Effects on Domestic Animals and Wildlife - While stating "There are available many scientific studies regarding the effects of noise on wildlife" the DEIS lists none of these studies or any references to the conclusions of these studies. It further states "...that protective noise criteria for animals be taken to be the same as for humans...". If that is the case then the noise levels measured in this DEIS as referenced above in point 6 have potential to cause equal harm to humans and animals yet Tables S4-S17 in the "Executive Summary of DEIS" specifically states "No adverse impacts expected". How are they drawing that conclusion? -7

The noise survey data in this DEIS is seriously flawed and inaccurate at best. From the manner in which this data has been presented, it appears the Air National Guard has deliberately skewed the facts and conveniently eliminated crucial surveys and data collecting methods to guarantee a predetermined result. Their conclusions are not based on factual or appropriately collected data or referenced to accepted scientific studies in the field. -8

The number of sorties in the La Veta MOA and Airburst Range is proposed to increase dramatically in this DEIS (the number of sorties on VR413 will increase by 75% alone!) and noise WILL be (as it currently is) a major problem in an area noted for its quiet rural lifestyle and peaceful wilderness refuges. The 140th wing of the Air National Guard is one of the finest tactical fighter wings in the country and they have achieved this status *with their current airspace*. The new Denver airport has caused a 10% loss of airspace yet the Guard is requesting more that a 40% increase. According to the Redeye Complex OARS (Operations and Resource Study) and the Guards' "Initiative 2010" the La Veta MOA is only "moderately useful" and it has been recommended the Airburst Range be relocated due to size, environmental and not meeting new standards requirements (Ahlquist page 6). Until the Guard can accurately and adequately justify their need for more airspace, more airspace should not be considered. Use of the La Veta MOA -9 -10,11

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RESPONSES TO COMMENTS

Response to Comment No.9

The opening of the Denver International Airport resulted in the loss of approximately 40 percent of the New Raymer MOA and air traffic control assigned airspace. The impact on the existing Kit Carson MOA, combined with changes proposed under the CAI Preferred Alternative, would result in an overall decrease in the total military training airspace available.

Response to Comment No.10

Under the Preferred Alternative in the DEIS, all low altitude flights (below 5,000 feet above ground level) will cease in the Wet Mountain Valley.

Response to Comment No.11

At this time, there are no issues that would lead to the immediate closing or reduction in use of the Airburst Range.

Response to Comment No.12

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

and Airburst Range should not be expanded and as proposed in "Initiative 2010" other alternatives should seriously be explored to eliminate use of this MOA and Airburst range totally.

I am appalled by the poor quality of this DEIS. In these times of fiscal frugality and tax payer accountability, the amount of money and time that has been spent to produce this virtually useless document (I was told at the public hearing that it was 17 million dollars and 4 years) borders on criminal. I will be requesting that my congressional representatives take a serious look at this DEIS process for fiscal wrong doing and for deliberately bypassing the NEPA (National Environmental Protection Act) process. As Program Manager you should be ashamed of this document. 12

Sincerely,

Toni Vakos, M.S.P.A.
Audiologist

Christina L. Van Fleteren
3270 S. Granby Street
Aurora, Colorado 80014

May 22, 1996

Program Manager, CAI EIS
Environmental Division
Air National Guard Readiness Center/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

RE: EIS for the Colorado Airspace Initiative
La Veta MOA; Westcliffe, Colorado; Wet Mountain Area

426

Dear Madam/Sir:

This evening, my husband and I attended the Public Meeting for the EIS at Rangeview High School in Aurora, Colorado. Our interest in the EIS is due to its impact in the Wet Mountains which is where my parents retired to from the Denver, Colorado area. My parents live on the western edge of the Wet Mountains overlooking the Wet Valley, 1/4 of a mile east of Rosita Road (Rosita Road is 13 miles west of Wetmore and 13 miles east of Westcliffe, Colorado) on a road named Junkins Loop.

The meeting was informational, educational, and well conducted. Our questions were answered knowledgeably and it was very noticeable that many hours and considerable effort had been put into its preparation.

I am not against the military and I fully believe the price we pay for freedom in today's world involves having a trained military force to protect us from the crazy people of the world who feel they have the right to usurp any people's freedom.

However, I speak for myself and probably for a lot of people who live in the city and have hopes of retiring to a less hectic, very scenic, and a quiet life in an area where "progress" is slow to touch. I know in my heart and in my mind that "progress" is slowly encroaching upon the rural areas of our state but it doesn't mean I have to like it. I know that the area my folks retired to will eventually have houses dotted all over their side of the mountain, but I don't have to like it. And I know that EIS is proposing to raise/retain their lowest flight height to 13,000 feet in that area but I still don't have to like the idea of the Air National Guard being there at all. If I had a choice I'd rather that area be completely abandoned by MOA/Air National Guard, but I also know that's not going to happen. Although few, if any, people will admit it I feel that the Wet Valley was chosen 20 years ago because Custer County is the poorest county in Colorado and there were less wealthy people to make a fuss and complain against MOA. I can't help but feel that any "study" is only as good as the people who develop them and like any study, the results can be tailored to favor the group for whom is paying for the study. I can't help but feel that even though the Air National Guard/MOA state that they will

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RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

A discussion on environmental justice has been added to the Final EIS. This new discussion may be found in Subsection 4.19. The concept of environmental justice addresses the issue of determining if actions of Federal agencies disproportionally impact the human health and environmental conditions in minority communities and low-income communities. The majority of the airspace associated with the alternatives addressed in the EIS has been in existence for many years and the changes being proposed would not significantly alter the current configuration. Environmental justice issues would be more relevant for new airspace, which occurs primarily in the southeastern portion of the State of Colorado. This new airspace does not affect any single minority group and overlies a wide variety of socioeconomic conditions.

Response to Comment No.3

The ANG takes the public's concerns about pilot accountability very seriously. Any misconduct by a military pilot is a serious matter. If a member of the public is experiencing any problems with the military's operations in any of the airspace in an area that affects a person directly, the public affairs officer at the nearest military installation should be contacted immediately, or call (800) 582-8507.

The Federal Aviation Administration and each military service have very strict rules to ensure pilots stay within defined training airspace. The rules govern minimum altitudes, maximum speed, and type maneuvers that can be performed inside and outside designated training airspace. Military commanders have the authority to suspend pilots who willfully violate flight rules, such as flying outside designated training airspace. The military closely manages the airspace they use to ensure they do not exceed planned parameters.

follow the rules, somebody is going to break the rules more than once-in-awhile since they've already done it (my parents live at 9,000 feet above sea level, and my brother, a former SAC B-52 Tailgunner, has been present at my parent's home when military aircraft have buzzed the area of my parents home; they were definitely below the required flight height).

I was assured at the meeting that should some hot shot pilot abuse the rules and decides to fly and/or makes a judgment error and flies below the 13,000 foot level a complaint to Mr. Buck Buckingham at Buckley Air Field will be heard; heard yes, but will action be taken to prevent a reoccurrence? First of all it's easy to pass the buck and say it wasn't one of "my" pilots, perhaps it was someone elese's. Second of all, the lack of adequate phone service in the Wet Mountain area makes it very difficult for many residents to call and make a timely complaint. And lastly, although I'm glad I now have a number to call to lodge a complaint, how do I know it won't happen again. Frankly, it will happen again because it's human nature. Also, it's pretty vague as to what the form of retribution will be for a person/pilot violating the rules. I'd like to know the punishment is great enough to prevent a reoccurrence; perhaps a substantial monetary fine to abusers; with the money collected from fines going into a fund to be used to compensate those agencies/persons directly affected and help clean-up efforts should a crash occur as a result of Air National Guard/MOA maneuvers in a EIS area. 3,4

I thank you for making provisions to allow the public to comment. I can hope you not only listen to our comments but that you also truly hear and act upon them.

Sincerely,

Christina L. Van Fleteren

Christina L. Van Fleteren

427

RESPONSES TO COMMENTS

Response to Comment No.4

Since its inception, the toll-free number (800) 582-8507 has helped the ANG to monitor and reduce the number of aircraft noise complaints. All calls to the number are taken seriously regardless of how the caller characterizes the complaint. If callers are not satisfied with the 800-number service, experience future problems with the toll-free number, or feel they are not getting a timely response, an alternative is to call the 140 WG Commander at (303) 340-9555.

William E. Wahl
44556 Parkmeadow Drive
Fremont, California
94539-6583

22 May 1996

SUBJECT: Comments to the DEIS for the Colorado Airspace Initiative

TO: Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

428

Dear Sir:

I have received and reviewed the Draft Environmental Impact Statement (DEIS) for the Colorado Airspace Initiative and the proposed Military Operations Areas and Military Training Routes for the Air National Guard. I find the conclusions in the DEIS directly in opposition to my experience.

This experience, upon which I am basing my opinion, is that of a 20-year military pilot plus observations by myself and my family while stationed in Europe of the impact and reaction to low level jet training. I can testify that jet training at altitudes below 1,000 feet is very disruptive to human activities whenever a jet passes. You need only ask the average German citizen what he thinks about "the sound of freedom" in regard to low level jet training to get an honest answer. Any argument that it will only happen a few times a day is beside the point. When your finger is in the light socket, it does not help to average it out with all the times it was not. 1

My family and I are in the process of building a home in Custer County near the town of Westcliffe Colorado. We have chosen that area after many years in city environments precisely because it does not have the noise and sudden intrusions we have been forced to endure in the city. If you now impose sudden, loud aircraft noises, you are degrading the value and reason for our moving our home--and doing so without permission, consultation or compensation. 2

There are very large and very sparsely populated areas in Utah, Arizona, Nevada, and Alaska. I ask that you conduct your low level operations away from the beautiful mountain and wilderness areas of Colorado which are enjoyed by people from around the United States. Specifically, I ask you not to use the La Veta MOA and those MTRs west of Airburst A, B and C that specifically fly over the mountains, forests and valleys of Colorado. Your training in these areas is very like cutting old growth forests. Once you open them up, they will not be the same, regardless of how many claims there are in the DEIS that there will be little overall impact. 3

I think I understand the need for realistic military training and the need for a professional military to defend the United States. However, if that military becomes painful, in and of itself, we are pursuing the wrong objectives. Please reconsider. 4

Sincerely,

William E. Wahl

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Response to Comment No.3

The use of other training areas was examined as part of the development of the alternatives studied in detail in the EIS in Subsection 2.3. The proposal was designed to minimize conflicts with potentially sensitive areas while providing the training resources necessary to meet military readiness requirements. Specific narrowing criteria for the selection of military training airspace (see Subsection 2.3.3 in Volume I) were used to evaluate other locations, and no alternative training areas were identified that could be substituted for the airspace configuration proposed in the alternatives studied in the EIS.

The primary user of the airspace included in the Colorado Airspace Initiative is the 140 WG based at Buckley Air National Guard Base in Aurora, Colorado. Because of limited resources and aeronautical constraints, virtually all of our nation's fighter units train in airspace that is within a "tank of gas" of the aircrews' base.

RESPONSES TO COMMENTS

Response to Comment No.4

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

FOUNTAINHEAD
COMMUNICATIONS

May 22, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Ave.
Andrews AFB, MD 20762-5157

RE: The Colorado Airspace Initiative

Dear Sir or Madame:

I am writing to express extreme opposition to the Air National Guard's proposal to increase low-altitude training in the San Luis and Wet Mountain Valleys of Colorado. In addition, I do not agree with the methodology or the conclusion in the DEIS that there will be "No significant impact" from military overflights in the mountains and valleys of south central Colorado. 1

The methodology of Day-Night Averaging in the San Luis/Wet Mountain Valley study is flawed precisely because this area is particularly quiet. The 65 decibels day-night average limit (which the Federal Interagency Committee on Noise states is annoying for ***communities situated next to airports***) is not based on good scientific principles for this situation and any conclusion based on this approach is false. 2,3

I have first-hand experience on the impact of such noise because I live in the residential community of Hilltop in Denver, Colorado. My neighborhood endured the noise from Stapleton International Airport for many years and currently is in the flight path of University Hospital Flight for Life helicopters as well as flights from Buckley ANG Base. This noise does negatively impact the quality of life here but I am prepared to deal with it and coexist with my neighbors. However, this same noise is absolutely unacceptable in San Luis and Wet Mountain Valleys. 4

I must strongly state my concern for the negative impact upon wildlife, the health of the environment and the peace and quiet that is the nature of this setting. It is inappropriate to conduct this type of training in the region of impact which includes two National Wilderness Areas, two National Forests, three state parks, one wildlife refuge, BLM-managed public lands and the perimeter of the Great Sand Dunes Monument. 5,6,7

I insist upon the elimination of Airburst MOA, LaVeta MOA, VR-413 and all MTRs leading to Airburst Range. Thank you for your consideration and I look forward to your earliest attention to this matter. 8

Best regards.

Robyn C. Weber
President, Fountainhead Communications

720 BIRCH STREET, DENVER, CO 80220 tel 303-393-0787 fax 303-377-5773

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

Response to Comment No.3

The approach used in the EIS has been modified. The Federal Interagency Committee on Noise (FICON), representing a variety of Federal agencies with a mix of concerns associated with aircraft noise, reviewed aircraft noise analyses issues in 1992. This committee's report (FICON 1992) continued an approach to evaluating relative impacts associated with aircraft noise that has been recognized by noise analysis experts as the most widely endorsed and comprehensive approach to aircraft noise analysis available. This approach to noise analysis was incorporated into the analyses associated with the Draft EIS. In general, Federal land use compatibility criteria are derivatives of guidelines first devised for land near airports. All land use compatibility is based on the use of Day-Night Average Sound Level (abbreviated as DNL or Ldn) as the descriptor representing community noise environments. The criteria treat areas below DNL 65 dB as compatible for all uses, including residential, and they treat DNL 65 dB as a threshold for significant exposure. There is no generally accepted method for treating rural areas differently for these purposes.

However, many EIS reviewers, including some members of the Federal regulatory community, felt the application of the FICON standards, and the 65 dB threshold, to a rural setting was inappropriate for such areas with more quiet ambient noise conditions. Consequently, the use of the 65 dB threshold as the sole means to assess relative impacts or the acceptability of noise levels associated with aircraft operations addressed in the EIS has been modified and the analysis now includes additional information to evaluate potential impacts.

Response to Comment No.4

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.5

Studies conducted on wildlife have shown that numerous wildlife species have the ability to adapt to the presence of man and various man-made sound sources, including jet aircraft noise. While the noise generated from low-altitude military overflights may be initially startling, habituation to jet aircraft noise occurs with most wildlife species. Species-specific responses to low-altitude overflights vary considerably, and responses from individual animals may have the potential to cause injury. However, wildlife populations are usually affected only when a variety of factors work in combination to impact them, including declines or fluctuations in the availability of a food source, habitat destruction or alteration, predation, hunting, trapping, poaching, disease, or inclement weather, rather than noise alone. Normally, it would be unrealistic to predict or attribute any wildlife population declines to a single stressor, such as noise. In addition, no published scientific evidence was identified that indicated harm may occur to wildlife as a result of exposure to the levels of noise generated by military aircraft that would utilize the airspace associated with the Colorado Airspace Initiative.

Response to Comment No.6

There would be some changes in sortie numbers, noise levels, and airspace dimensions under the Original Proposal and the Preferred Alternative addressed in the EIS. However, overall flying hours of the 140 WG will be reduced from 5005 hours to 4600 hours. When compared to existing military aircraft training in the study area, these changes would not change the current levels of solitude and peace and quiet experienced by residents. As under current conditions, noise from military aircraft operations may periodically disturb citizens and affect their enjoyment of solitude; however, opportunities for abundant periods of total peace and quiet would continue as under present conditions.

Response to Comment No.7

The ANG adheres to its "Policy on Air National Guard Overflights of Designated Wilderness and Wild and Scenic Rivers," as presented in Appendix L. This policy is intended to protect specifically identified areas, such as the Sangre de Cristo and Greenhorn Mountain Wilderness Areas, by limiting training operations to no lower than 2,000 feet above ground level whenever possible unless safety of the flight or operational parameters (e.g., weather conditions) may be compromised.

Response to Comment No.8

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

RE: Colorado Airspace Initiative - Draft Environmental Impact Statement

Dear Program Manager,

Hearing the news of this proposed initiative simply made me want to cry. I have spent all my years working, saving every nickle I possibly can to get my home built in a setting exactly like that of the Custer County Valley. Reaching that goal is a dream come true and now that dream is in danger of becoming a nightmare. 1

I don't even know what to say to appeal to your decency because I don't understand how anyone who has been in that valley and heard the silence that prevails there could even consider to commit this unthinkable act. 2

A few years ago the Army recruitment slogan was "Because freedom isn't free" (as if any single U.S. citizen ever thought for a moment that freedom was free) and what a price we pay! You would not permit me for a second to randomly drive my car through your Air Force Base. Yet I would not do so because I honor and respect your space and function in this, the finest nation on the planet. Why are we, the people, not granted the same respect and consideration that we give you? 3

Averaging a jet's 110 decibel level over a period of 24 hours is ridiculous, manipulative, and obvious propoganda. 4

The covenant for my land states; "Nothing shall be done or permitted on any lot which may be or become an annoyance or nuisance to the neighborhood."

Won't you please reconsider and of your own free will

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RESPONSES TO COMMENTS

Response to Comment No.1

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Response to Comment No.2

There would be some changes in sortie numbers, noise levels, and airspace dimensions under the Original Proposal and the Preferred Alternative addressed in the EIS. However, overall flying hours of the 140 WG will be reduced from 5005 hours to 4600 hours. When compared to existing military aircraft training in the study area, these changes would not change the current levels of solitude and peace and quiet experienced by residents. As under current conditions, noise from military aircraft operations may periodically disturb citizens and affect their enjoyment of solitude; however, opportunities for abundant periods of total peace and quiet would continue as under present conditions.

Response to Comment No.3

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

grant us our existing sacred silence that we so cherish?

Thank you, sir, for hearing my plea,

Sincerely,

Jaimes D. Brown

435

Response to Comment No.4

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

May 23, 1996

Program Manager, CAI EIS
ANGRC/ CEVP
3500 Fetchet Avenue
Andrews AFB, MD
20762 - 5157

I am writing in response to the notice I received from Custer County notifying me of the action the Colorado Airspace Initiative plans on taking.

I personally purchased some remote mountain property in the Westcliff region in order to live a quite, peacfull life and to commune with mother nature. After purchasing the property I have returned to medical school with the hopes of returning to the area to provide quality medical services to the medically underserved. 1

I currently reside outside the metropolitan Detroit area and dream of the time I can build my residence on my mountain porperty. Your initiative is just not welcomed here. I know of the decibels they speak of because I live 15 miles from Selfridge Air Force Base and their planes go over head, and sometimes I think my god what is that awful loud noise. It makes you stop dead in your tracks, because of the change in sound.

Again, being so familiar with the high level of noise associated with air traffic and fly overs I did not search out my retirement property to have this come over head. The adverse effect on wildlife, loss of property values, the detrimental environmental effects and the quality of life are the main reasons for me seaking out this property. 2, 3,4,5

I do not support this initiative and wanted to take the time to express my dissatisfaction.

Sincerely,

Beth Ayn Deutsch

Beth Ayn Deutsch
Property owner in Westcliff

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RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Response to Comment No.3

Studies conducted on wildlife have shown that numerous wildlife species have the ability to adapt to the presence of man and various man-made sound sources, including jet aircraft noise. While the noise generated from low-altitude military overflights may be initially startling, habituation to jet aircraft noise occurs with most wildlife species. Species-specific responses to low-altitude overflights vary considerably, and responses from individual animals may have the potential to cause injury. However, wildlife populations are usually affected only when a variety of factors work in combination to impact them, including declines or fluctuations in the availability of a food source, habitat destruction or alteration, predation, hunting, trapping, poaching, disease, or inclement weather, rather than noise alone. Normally, it would be unrealistic to predict or attribute any wildlife population declines to a single stressor, such as noise. In addition, no published scientific evidence was identified that indicated harm may occur to wildlife as a result of exposure to the levels of noise generated by military aircraft that would utilize the airspace associated with the Colorado Airspace Initiative.

Response to Comment No.4

In order to address concerns regarding possible devaluation of real estate, the EIS evaluated historical data for property values. This analysis compares counties within the study area for the CAI, including those areas with currently utilized military airspace, to counties outside the study area. The results indicate that all counties experienced increases in property values. Further, in terms of median property values, counties within the study area for the CAI increased 99.71 percent compared to counties outside the study area, which increased 57.74 percent. Whereas a report published by the Federal Aviation Administration concludes "that noise has been shown to decrease the value of property by only a small amount--approximately 1 percent decrease per decibel (DNL)," this analysis applies to airport/airfield environments and not land areas underlying military training airspace. Therefore, although it is not possible to absolutely conclude that counties experiencing military aircraft overflights incur any greater change in real estate values than counties not experiencing similar overflight activity, it is not likely that real estate values would drop as a result of the CAI.

RESPONSES TO COMMENTS

Response to Comment No.5

Many citizens have expressed concern that their quality of life, which is based directly on the kind of lifestyle that they can enjoy while residing in or visiting the State of Colorado, will be changed by implementation of the CAI. The U.S. Air Force, including the ANG, has been conducting military aircraft operations in the Wet Mountain Valley and the San Luis Valley areas where people are most concerned for approximately 25 years. Most of the military airspace proposed under any of the alternatives is currently in use. Commercial aircraft overflights have also been taking place and will continue to do so. Citizens may notice changes in military aircraft overflights in certain areas associated with the CAI. The number of sorties are proposed to increase moderately in portions of the study area and decrease in others. Overall sorties will be reduced from 5,441 to 4,909 under the Preferred Alternative. The bottom altitudes of several airspaces where citizens are most concerned have been raised to reduce noise levels. Therefore, existing quality of life should not be changed.

Doyle & Ogden Insurance Advisors
3230 BROADMOOR, S.E., GRAND RAPIDS, MI 49512 PH. (616) 949-9000 / FAX (616) 949-9568

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Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

DATE: 05/23/96

Dear Sirs,

I am writing in regard to the proposed MOAs and MTRs over Custer County, Colorado. As a property owner in the area, I have grave concerns about the impact of the proposals on many aspects of the environment.

First of all, the noise analysis study based on Day-Night Averaging is a ludicrous measure of the true impact of the increased decibel levels that a MTR will create. If there is to be any real accounting for the impact of noise on the environment, a different standard MUST be analysed to reflect the difference between what the FICON calls acceptable and what a pristine mountain valley considers acceptable. 1,2

Secondly, the impact on property values, let alone the value of life in the area, will be severely compromised by any of the offered alternatives in the Colorado Airspace Initiative. Human life as well as animal and plant life will be effected negatively by the intrusion of the MOAs. How do you propose to compensate for these losses? 3,4

Lastly, I can't understand why my government, at this stage of world politics and domestic hardship, would consider expanding military operations and expenses. Are we not trying to cut back on unnecessary spending and post cold war aggression? I would think that the rerouting needed due to the expanded Denver Airport would open the opportunity to cut back the airspace needed for all military operations. I would enjoy a response to this inquiry. 5

Please, add this letter to the pile of protests from the local residents. I hope that you will see there is very much resistance to the proposals and the rational response would be to contract as opposed to expand at this time. 6

Thank you,

Michael K & Theresa L Doyle
7172 Thorncrest SE
Grand Rapids, MI 49546

RESPONSES TO COMMENTS

Response to Comment No.1

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

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The approach used in the EIS has been modified. The Federal Interagency Committee on Noise (FICON), representing a variety of Federal agencies with a mix of concerns associated with aircraft noise, reviewed aircraft noise analyses issues in 1992. This committee's report (FICON 1992) continued an approach to evaluating relative impacts associated with aircraft noise that has been recognized by noise analysis experts as the most widely endorsed and comprehensive approach to aircraft noise analysis available. This approach to noise analysis was incorporated into the analyses associated with the Draft EIS. In general, Federal land use compatibility criteria are derivatives of guidelines first devised for land near airports. All land use compatibility is based on the use of Day-Night Average Sound Level (abbreviated as DNL or Ldn) as the descriptor representing community noise environments. The criteria treat areas below DNL 65 dB as compatible for all uses, including residential, and they treat DNL 65 dB as a threshold for significant exposure. There is no generally accepted method for treating rural areas differently for these purposes.

However, many EIS reviewers, including some members of the Federal regulatory community, felt the application of the FICON standards, and the 65 dB threshold, to a rural setting was inappropriate for such areas with more quiet ambient noise conditions. Consequently, the use of the 65 dB threshold as the sole means to assess relative impacts or the acceptability of noise levels associated with aircraft operations addressed in the EIS has been modified and the analysis now includes additional information to evaluate potential impacts.

Response to Comment No.3

In order to address concerns regarding possible devaluation of real estate, the EIS evaluated historical data for property values. This analysis compares counties within the study area for the CAI, including those areas with currently utilized military airspace, to counties outside the study area. The results indicate that all counties experienced increases in property values. Further, in terms of median property values, counties within the study area for the CAI increased 99.71 percent compared to counties outside the study area, which increased 57.74 percent. Whereas a report published by the Federal Aviation Administration concludes "that noise has been shown to decrease the value of property by only a small amount--approximately 1 percent decrease per decibel (DNL)," this analysis applies to airport/airfield environments and not land areas underlying military training airspace. Therefore, although it is not possible to absolutely conclude that counties experiencing military aircraft overflights incur any greater change in real estate values than counties not experiencing similar overflight activity, it is not likely that real estate values would drop as a result of the CAI.

Response to Comment No.4

Many citizens have expressed concern that their quality of life, which is based directly on the kind of lifestyle that they can enjoy while residing in or visiting the State of Colorado, will be changed by implementation of the CAI. The U.S. Air Force, including the ANG, has been conducting military aircraft operations in the Wet Mountain Valley and the San Luis Valley areas where people are most concerned for approximately 25 years. Most of the military airspace proposed under any of the alternatives is currently in use. Commercial aircraft overflights have also been taking place and will continue to do so. Citizens may notice changes in military aircraft overflights in certain areas associated with the CAI. The number of sorties are proposed to increase moderately in portions of the study area and decrease in others. Overall sorties will be reduced from 5,441 to 4,909 under the Preferred Alternative. The bottom altitudes of several airspaces where citizens are most concerned have been raised to reduce noise levels. Therefore, existing quality of life should not be changed.

138L Michael K. and Theresa Doyle
L.

Response to Comment No.5

Training for potential military conflict in time of peace is a reality recognized by the Congress and the President. As military forces are cut back, the quality of training for existing forces must be maintained and improved to ensure our nation has an effective military. As the active duty military force is reduced in size, the ANG role and the role of the 140 WG in the total force structure is increasing. Over the past several years, the DOD has conducted studies to evaluate mission readiness and cost effectiveness of its total force. In comparison to DOD regular components, the ANG has relatively low operating costs and provides a cost effective investment.

Response to Comment No.6

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

138L	Michael K. and Theresa Doyle L.	

CO WEST INSURANCE GROUP

P.O. BOX 906
PARKER, COLO. 80134

Telephone 303-841-8700
Fax 303-841-8844

05/23/96
Program Manager, CAI EIS
ANGRC/CEVP
3500 Fletchet Avenue
Andrews AFB, MD 20762-5157

Dear Sir;

We have received information that the Air National Guard is still pursuing approval of the Colorado Airspace Initiative to fly low level sorties over the Wet Mountain Valley and surrounding areas. This is unacceptable to residents and property owners in the valley. Not only is it unacceptable, it is unreasonable for them to continue to try and force us to accept their unnecessary wishes. 1

According to a recent DEIS statement the ambient noise levels are below their standard level of 65 decibels on an average basis. They report that levels above 65 decibels are annoying to communities next to an airport. They admit that the area is not the same as a metropolitan area yet use the same standards. 2

President Clinton recently signed a bill setting aside the entire Sangre De Cristo high country as a wilderness area. Obviously the House, Senate and President felt it was in the best interest of the people to set aside this area and preserve it in it's natural state. Why does the military insist on destroying what the government has agreed should be left alone? As property owners who retreat to this area for peace and quiet and to enjoy the beauty of nature, we agree with the President and strongly oppose Airburst MOA, LaVeta MOA and all MTR'S leading to the Airburst Range. 3, 4

Our military forces should be used to protect and serve us, not destroy. The type of use they are proposing will have an adverse effect on our wildlife, create a risk of destruction by way of possible plane crashes and fires, loss of property value, reduction of the quality of life in the valley, and unreasonable noise pollution. 5,6,7,8,9

We strongly request that the Air National Guard not be allowed to initiate this program.

Sincerely,
Gary & Marilyn Eastwood
Property Owners
Bull Domingo Ranch
Westcliffe, Colorado

cc: Custer County Action Association
Governor Roy Romer
Congressman Scott McInnis
Senator Hank Brown
Senator Ben Nighthorse Campbell

RESPONSES TO COMMENTS

Response to Comment No.1

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Response to Comment No.2

The approach used in the EIS has been modified. The Federal Interagency Committee on Noise (FICON), representing a variety of Federal agencies with a mix of concerns associated with aircraft noise, reviewed aircraft noise analyses issues in 1992. This committee's report (FICON 1992) continued an approach to evaluating relative impacts associated with aircraft noise that has been recognized by noise analysis experts as the most widely endorsed and comprehensive approach to aircraft noise analysis available. This approach to noise analysis was incorporated into the analyses associated with the Draft EIS. In general, Federal land use compatibility criteria are derivatives of guidelines first devised for land near airports. All land use compatibility is based on the use of Day-Night Average Sound Level (abbreviated as DNL or Ldn) as the descriptor representing community noise environments. The criteria treat areas below DNL 65 dB as compatible for all uses, including residential, and they treat DNL 65 dB as a threshold for significant exposure. There is no generally accepted method for treating rural areas differently for these purposes.

However, many EIS reviewers, including some members of the Federal regulatory community, felt the application of the FICON standards, and the 65 dB threshold, to a rural setting was inappropriate for such areas with more quiet ambient noise conditions. Consequently, the use of the 65 dB threshold as the sole means to assess relative impacts or the acceptability of noise levels associated with aircraft operations addressed in the EIS has been modified and the analysis now includes additional information to evaluate potential impacts.

Response to Comment No.3

The ANG adheres to its "Policy on Air National Guard Overflights of Designated Wilderness and Wild and Scenic Rivers," as presented in Appendix L. This policy is intended to protect specifically identified areas, such as the Sangre de Cristo and Greenhorn Mountain Wilderness Areas, by limiting training operations to no lower than 2,000 feet above ground level whenever possible unless safety of the flight or operational parameters (e.g., weather conditions) may be compromised.

Response to Comment No.4

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

Response to Comment No.5

Studies conducted on wildlife have shown that numerous wildlife species have the ability to adapt to the presence of man and various man-made sound sources, including jet aircraft noise. While the noise generated from low-altitude military overflights may be initially startling, habituation to jet aircraft noise occurs with most wildlife species. Species-specific responses to low-altitude overflights vary considerably, and responses from individual animals may have the potential to cause injury. However, wildlife populations are usually affected only when a variety of factors work in combination to impact them, including declines or fluctuations in the availability of a food source, habitat destruction or alteration, predation, hunting, trapping, poaching, disease, or inclement weather, rather than noise alone. Normally, it would be unrealistic to predict or attribute any wildlife population declines to a single stressor, such as noise. In addition, no published scientific evidence was identified that indicated harm may occur to wildlife as a result of exposure to the levels of noise generated by military aircraft that would utilize the airspace associated with the Colorado Airspace Initiative.

Response to Comment No.6

The fire potential associated with aircraft overflights is generated from the potential for an aircraft crash or the use of flares in training. The EIS evaluated the potential for an aircraft crash resulting from the proposal. This evaluation determined that the likelihood of an aircraft crash would be very low. Therefore, the potential for a fire resulting from an aircraft crash would also be very low. In fact, military accidents have declined in the past decade, as described in the February 1996 report of the General Accounting Office, an organization under the U.S. Congress.

Authorized users of the airspace have proposed the continued use of flares in their training. However, the flares would not be released below 2,000 feet AGL. Once a flare is released, it ignites immediately. The burn time for a flare is approximately 4.0 to 4.5 seconds. In those 4.0 to 4.5 seconds, the flare falls approximately 500 feet. This leaves a safety margin of approximately 1,500 feet to allow for a flare that burns for more than 4.5 seconds to extinguish itself. The 140 WG has no knowledge of any fires being caused by flares released during current training missions by any aircraft utilizing Colorado Airspace Initiative airspace.

Response to Comment No.7

In order to address concerns regarding possible devaluation of real estate, the EIS evaluated historical data for property values. This analysis compares counties within the study area for the CAI, including those areas with currently utilized military airspace, to counties outside the study area. The results indicate that all counties experienced increases in property values. Further, in terms of median property values, counties within the study area for the CAI increased 99.71 percent compared to counties outside the study area, which increased 57.74 percent. Whereas a report published by the Federal Aviation Administration concludes "that noise has been shown to decrease the value of property by only a small amount--approximately 1 percent decrease per decibel (DNL)," this analysis applies to airport/airfield environments and not land areas underlying military training airspace. Therefore, although it is not possible to absolutely conclude that counties experiencing military aircraft overflights incur any greater change in real estate values than counties not experiencing similar overflight activity, it is not likely that real estate values would drop as a result of the CAI.

139L	Gary & Marilyn	Eastwood	

Response to Comment No.8

Many citizens have expressed concern that their quality of life, which is based directly on the kind of lifestyle that they can enjoy while residing in or visiting the State of Colorado, will be changed by implementation of the CAI. The U.S. Air Force, including the ANG, has been conducting military aircraft operations in the Wet Mountain Valley and the San Luis Valley areas where people are most concerned for approximately 25 years. Most of the military airspace proposed under any of the alternatives is currently in use. Commercial aircraft overflights have also been taking place and will continue to do so. Citizens may notice changes in military aircraft overflights in certain areas associated with the CAI. The number of sorties are proposed to increase moderately in portions of the study area and decrease in others. Overall sorties will be reduced from 5,441 to 4,909 under the Preferred Alternative. The bottom altitudes of several airspaces where citizens are most concerned have been raised to reduce noise levels. Therefore, existing quality of life should not be changed.

Response to Comment No.9

Noise from aircraft operations contributes to the overall noise burden on the environment generally referred to as "noise pollution." Military aircraft operations contribute to this burden. Widely accepted means to measure and judge the severity of "noise pollution" do not exist; however, the means to measure or model noise levels does exist. This EIS provides an evaluation of the noise levels associated with military aircraft operations. These levels, when combined with other sources of noise within the environment, contribute to "noise pollution."

May 23, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD
20762-5157

RE: **Support FOR** the Colorado Airspace Initiative, Air National Guard Military Operations Areas

I have not had the opportunity to read the Draft EIS for the Colorado Airspace Initiative so my comments do not require a response.

I am a Custer County land owner and I would like to counter what the Custer County Action Association is printing about the DEIS. I believe that any noise created by the Air Force flying over Custer County will have negligible impact. There is no way that noise will impact the economy and jobs of Westcliffe, CO residents. I do not know of any instance where an airbase has negatively impacted the economy. In fact, quite the contrary, air bases have arguably improved local economies. So there is no valid argument that noise annoyance equates to negative economic impact. This radical Association would have the public believe that there will be an adverse effect on wildlife, a risk of crashes and forest fires, loss of property values and destruction of quality of life. **BULL!** 1

I would ask only that our service men and women in the Air National Guard continue to do your jobs, to protect our skies. And if that means training in the skies above us, I'm all for it.

There are many home owners and land owners in Custer County who support the Air Force and the proposed Military Operations Areas. Unfortunately, many have become complacent and joined the ranks of the silent majority.

Good luck and thank you for a job well done.

Wesley G. Estill

Wesley G. Estill
1618 Casa
Amarillo, Texas
79111

RESPONSES TO COMMENTS

Response to Comment No. 1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

May 23, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

Dear Program Manager:

I will be spending the Memorial Day Weekend with friends in their cabin near Westcliffe, Colorado.

For those who live there, and those of us who "escape" there from our busy lives, I consider the possibility of military maneuvers in the Wet Mountain Valley to be completely odious. 1

This area is one of Colorado's most beautiful and peaceful. Please do not contribute to the invasion of its serenity. The impact of the planned maneuvers would be immense. 2

Please carefully consider this letter and the other protests you receive. We want to preserve the Wet Mountain Valley as the intensely beautiful place it is. Choose another place which would be less impacted and which is less loved and enjoyed by tens of thousands of people! 3

Sincerely,

Linda Feather

Linda Feather
4435 Grinnell Avenue
Boulder, Colorado 80303

cc: Custer County Action Association

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RESPONSES TO COMMENTS

Response to Comment No.1

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Response to Comment No.2

There would be some changes in sortie numbers, noise levels, and airspace dimensions under the Original Proposal and the Preferred Alternative addressed in the EIS. However, overall flying hours of the 140 WG will be reduced from 5005 hours to 4600 hours. When compared to existing military aircraft training in the study area, these changes would not change the current levels of solitude and peace and quiet experienced by residents. As under current conditions, noise from military aircraft operations may periodically disturb citizens and affect their enjoyment of solitude; however, opportunities for abundant periods of total peace and quiet would continue as under present conditions.

Response to Comment No.3

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

May 23, 1996

Program Manager, CAIEIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

To Whom It May Concern:

My husband and I purchased 20 acres in Custer County to retire on so that we could enjoy the quietness of the area and the beautiful wildlife. We now live in a high concentration noise level - chemical plants - airports - high volume of traffic - large numbers of people. We certainly do not wish our retirement paradise to be invaded by National Guard Training Flights of such a magnitude as approximately 40 flights per day and night. All of a sudden our property has lost it's value because of this proposed influx of training flights. All property owners lose because of the adverse effect on wildlife, the risk of crashes and forest fires, loss of property values, destruction of our economy and quality of life, detrimental environmental effects, and noise pollution as if we were near an international airport. 1

We are responding to the Draft Environmental Impact Statement - We do not want the new Air National Guard Military Operations Areas and Military Training Routes over our valley as this is what the Air National Guard is about to do. The way of life which attracted us to this area, and the economic factors and jobs which enable us to live here are endangered. We do not want to see this area overrun with approximately 3,000 sorties (which equates to as many as 17,000 extremely loud overflights per year) - that's approximately 40 flights per day and night. 2 3

That our taxes have paid for the Draft Environmental Impact Statement is a whitewash. The report claims that all this noise will have no effect on us. One big problem with the Draft Environmental Impact Statement and most of the so-called findings are based on one remarkable ridiculous type of noise analysis: Day-Night Averaging. Our valley is quiet. The ambient noise level in some parts of the valley is 30 decibels or less. The Federal Interagency Committee for Noise says that the standard average noise level of 65 decibels over a 24 hour average is an acceptable 4 5

450

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Response to Comment No.3

Under the Preferred Alternative, the maximum number of sorties for the Colorado Airspace Initiative would decrease from 5,441 sorties to 4,909 sorties per year.

RESPONSES TO COMMENTS

Response to Comment No.4

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

142L	James H. and Sammye Felps K.	

level. However, if one jet flies over at 110 decibels, that noise is averaged over a 24 hour period. Even though the average decibel level remains in range, the tranquillity of the valley has been shattered. The Federal Interagency Committee for Noise says that an average noise level above 65 decibels is annoying for communities next to commercial airports. The Draft Environmental Impact Statement admits that the Region of Impact here is not the same kind of area as a community next to an airport, and yet it uses the same standard of 65 decibels over a 24 hour average as an acceptable level. Based on this standard and according to the Draft Environmental Impact Statement, there is no impact on our valley. It is a farce to use this standard and this type of analysis in this setting.

Therefore; we strongly object to the Colorado Airspace Initiative and we must insist on the elimination of Airburst MOA, LaVeta MOA and all MTRs leading to the Airburst Range. 6

Thank you for your time and your understanding of how we feel about this situation.

Respectfully yours,

James H. Felps
Sammye K. Felps

James H. Felps and Sammye K. Felps

CC: Custer County Action Association
Post Office Box 552
Westcliffe, CO 81252

Governor Roy Romer
136 State Capital Bldg.
Denver, CO 80203-1792

Senator Hank Brown
716 Hart Senate Office Bldg.
Washington, DC 20510

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Response to Comment No.5

The approach used in the EIS has been modified. The Federal Interagency Committee on Noise (FICON), representing a variety of Federal agencies with a mix of concerns associated with aircraft noise, reviewed aircraft noise analyses issues in 1992. This committee's report (FICON 1992) continued an approach to evaluating relative impacts associated with aircraft noise that has been recognized by noise analysis experts as the most widely endorsed and comprehensive approach to aircraft noise analysis available. This approach to noise analysis was incorporated into the analyses associated with the Draft EIS. In general, Federal land use compatibility criteria are derivatives of guidelines first devised for land near airports. All land use compatibility is based on the use of Day-Night Average Sound Level (abbreviated as DNL or Ldn) as the descriptor representing community noise environments. The criteria treat areas below DNL 65 dB as compatible for all uses, including residential, and they treat DNL 65 dB as a threshold for significant exposure. There is no generally accepted method for treating rural areas differently for these purposes.

However, many EIS reviewers, including some members of the Federal regulatory community, felt the application of the FICON standards, and the 65 dB threshold, to a rural setting was inappropriate for such areas with more quiet ambient noise conditions. Consequently, the use of the 65 dB threshold as the sole means to assess relative impacts or the acceptability of noise levels associated with aircraft operations addressed in the EIS has been modified and the analysis now includes additional information to evaluate potential impacts.

Response to Comment No.6

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

Congressman Scott McInnis
512 Cannon Office Bldg.
Washington, DC 20515-0603

Senator Ben Nighthorse Campbell
3880 Russell Senate Office Bldg.
Washington, DC 20510

Written Comment Form

SHIPPED MAY 2 3 1996

ENVIRONMENTAL IMPACT STATEMENT FOR THE COLORADO AIRSPACE INITIATIVE

If you would prefer to submit written comments on the DEIS, please use this form. Continue on the back of the form or attach extra sheets, as necessary. Thank you.

NAME: Carlton Gamer

TITLE/ORGANIZATION: Professor Emeritus, The Colorado College

ADDRESS: 2364 Wood Avenue, Colorado Springs, CO 80907
(Street) (City/State/Zip)

and 118 Scrub Oak Road, Westcliffe, CO 81252

- COMMENTS -

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I do not support the pilot training mission of the Air National Guard as described in the brochure "Why and How We Train." Specifically, I have two objections to Low-Altitude Air-to-Air Training (LOWAT) as described on page 8, paragraph 3 of that brochure. The "specific target" referred to in the given scenario is clearly an enemy target on foreign territory. Furthermore, no stipulation is made that the target be a military rather than a civilian one. The "opposing fighter aircraft," which are stigmatized as "'Bandits'...sent out to intercept" our aircraft, are clearly engaged in defending their airspace against our attack. In "neutralizing the threat" posed by these defenders and "proceeding to the target," the pilots of our own aircraft are clearly waging offensive warfare. My first objection to LOWAT, then, has to do with policy: I do not approve of the deployment of the Colorado Air National Guard's 140th Wing to wage offensive warfare against targets--especially ill-defined ones--on foreign territory. My second objection to LOWAT has to do with strategy: Martin Libicki, of the National Defense University, in "Future U. S. Defenses" (The Washington Quarterly, Vol. 19, No. 1, Winter, 1996, pp. 110-13), describes the current revolution in military affairs (RMA), including the development and global proliferation of precision-guided munitions (PGMs) and unmanned aerial vehicles (UAVs), and concludes, "To be seen on the battlefield is to be killed...The platforms from which modern militaries have waged war for

1

(turn over)

Please hand this form to the staff, drop into the collection box, or mail to:

Program Manager, CAI EIS
Environmental Division
Air National Guard Readiness Center/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

RESPONSES TO COMMENTS

Response to Comment No.1

Low-altitude flights allow pilots to learn to avoid detection and to survive in combat. Low-altitude flying provides a significant operational procedure through which detection can be minimized. Training is essential to acquire the skill to use this procedure. Specific combat conditions that allowed high-altitude operations in the Gulf War may not exist in future conflicts. The need for this training is required by Air Force training regulations.

Response to Comment No.2

Sortie numbers are an excellent means to determine potential overflights. MTRs are one-way traffic routes so an aircraft can pass over a single location only one time on one sortie. MOAs do allow an opportunity for multi-directional traffic; however, training objectives to vary the pilot's experiences during the sortie and fuel limitations of the aircraft would make repeat identical passes over one ground location an undesirable and unlikely training scenario.

Response to Comment No.3

It is possible that aircraft noise could startle domestic animals in close association with humans (e.g., penned animals) and cause injury to humans or the animals. However, animals have been shown through numerous studies to adapt and habituate to various sound sources, including jet aircraft noise. Because the CAI airspaces involved where humans and domestic animals are in close association are also mostly existing airspace that have been utilized for over 25 years, this adaptation and habituation to jet aircraft noise has likely already occurred.

a century--aircraft, ships, tanks, and the like--are becoming less and less viable in modern conventional war." From this standpoint, LOWAT, with its highly visible maneuvers, is destined for obsolescence. On the grounds I have stated, as well as numerous others, I feel that the case for the expansion of airspace for LOWAT in the Colorado Airspace Initiative is not a valid one. 1

In addition, I concur with many of the objections to the CAI made by speakers at the Public Hearing I attended in Westcliffe, CO on May 16, 1996, particularly the following:

In the Draft Environmental Impact Statement, the obscuring of the distinction between numbers of sorties and numbers of flyovers; 2

the failure to take into adequate account the "startle effect" of flyovers; 3

the invalidity of noise averaging; 4

the potential for fire posed by low-flying jets; 5

the biological and medical hazards posed by jet noise to humans, livestock, and wildlife; 6

the intrusiveness of jet noise on the tranquility of the environment and the concomitant adverse impact of flyovers on tourism, business, and the economies of those counties affected by the Colorado Airspace Initiative. 7

Carlton Gamer

Carlton Gamer
May 23, 1996

RESPONSES TO COMMENTS

Response to Comment No.4

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

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Response to Comment No.5

The fire potential associated with aircraft overflights is generated from the potential for an aircraft crash or the use of flares in training. The EIS evaluated the potential for an aircraft crash resulting from the proposal. This evaluation determined that the likelihood of an aircraft crash would be very low. Therefore, the potential for a fire resulting from an aircraft crash would also be very low. In fact, military accidents have declined in the past decade, as described in the February 1996 report of the General Accounting Office, an organization under the U.S. Congress.

Authorized users of the airspace have proposed the continued use of flares in their training. However, the flares would not be released below 2,000 feet AGL. Once a flare is released, it ignites immediately. The burn time for a flare is approximately 4.0 to 4.5 seconds. In those 4.0 to 4.5 seconds, the flare falls approximately 500 feet. This leaves a safety margin of approximately 1,500 feet to allow for a flare that burns for more than 4.5 seconds to extinguish itself. The 140 WG has no knowledge of any fires being caused by flares released during current training missions by any aircraft utilizing Colorado Airspace Initiative airspace.

Response to Comment No.6

Biological impacts to animals were previously addressed in the Draft EIS; however, a subsection addressing human health effects has been added to the Final EIS and can be found in Subsection 4.13.

Response to Comment No.7

The role of tourism in the local economy, and its impact from the alternatives associated with the CAI, have been studied in the EIS as a part of the evaluation of socioeconomic impacts. There are a number of factors, other than aircraft operations, that may affect tourism and the use of recreational areas, including weather, the proximity of other attractions in the area, and the economy. While it is possible that a tourist visiting an area may find an aircraft overflight to be annoying, no significant change to the tourist industry would be expected considering the fact that the majority of the CAI airspace has existed for many years and the relevant influences from military aircraft operations are not changing in the study area. The contribution of tourism earnings to total industry earnings was presented in the EIS for each airspace. In all instances, these values were very consistent with overall state levels of tourism earnings as compared to industry earnings.

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May 23, 1996
4258 Grove St.
Denver, CO 80211

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Ave.
Andrews AFB, MD 20762-5157

To whom it may concern:

I am writing to express my outrage concerning the Air National Guard's proposal for the Airburst MOA, La Veta MOA, and MTR's in southern Colorado. The military establishment has a history of using sparsely populated areas as playgrounds for testing weapons and training personnel. I guess the logic has been that if few people live somewhere, it must be okay to make a lot of noise or in the case of the Nevada desert, contaminate it. Hey, this is for national defense - what a small sacrifice? 1

But real people and real wildlife do live in these places. I am a property owner in Silver Cliff, Colorado and even though I am there on a part-time basis, the thought of military aircraft buzzing overhead distresses me.

It might be difficult for a person in the military to understand, but the people in the Wet Mountain Valley make their livelihood through ranching and tourism. Would you choose to take your vacations at or near a large commercial airport or military air base? Would you establish your ranch near one of these aviation facilities? Probably not because these are incompatible activities. Yet the Air National Guard still wants to go ahead with its plan. It doesn't make any sense. 2

I request that the Air National Guard's plan be eliminated. The people of Custer and Huerfano county don't want MOA's and MTR's and I know most of my fellow Coloradans feel the same way. This is a special and sacred place and what the Air National Guard wants to do is immoral and un-American.

If the Air National Guard is going to have MOA's and MTR's, then all Americans should share the burden of noise, loss of property value, degradation to quality of life, and effect on wildlife. The Air National Guard to be fair, must consider places like Denver, Winter Park, Grand Junction, and Ft. Collins to have MOA's and MTR's. Even though the population is large in some of these towns, the impact on people and all living creatures is equal regardless of the size of a community. MOA's and MTR's must be looked at from a social perspective along with an environmental perspective. 3,4

I thank you for your time.

Sincerely,

Mitchell F. Gerber

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Response to Comment No.3

The use of other training areas was examined as part of the development of the alternatives studied in detail in the EIS in Subsection 2.3. The proposal was designed to minimize conflicts with potentially sensitive areas while providing the training resources necessary to meet military readiness requirements. Specific narrowing criteria for the selection of military training airspace (see Subsection 2.3.3 in Volume I) were used to evaluate other locations, and no alternative training areas were identified that could be substituted for the airspace configuration proposed in the alternatives studied in the EIS.

The primary user of the airspace included in the Colorado Airspace Initiative is the 140 WG based at Buckley Air National Guard Base in Aurora, Colorado. Because of limited resources and aeronautical constraints, virtually all of our nation's fighter units train in airspace that is within a "tank of gas" of the aircrews' base.

RESPONSES TO COMMENTS

Response to Comment No.4

A discussion on environmental justice has been added to the Final EIS. This new discussion may be found in Subsection 4.19. The concept of environmental justice addresses the issue of determining if actions of Federal agencies disproportionally impact the human health and environmental conditions in minority communities and low-income communities. The majority of the airspace associated with the alternatives addressed in the EIS has been in existence for many years and the changes being proposed would not significantly alter the current configuration. Environmental justice issues would be more relevant for new airspace, which occurs primarily in the southeastern portion of the State of Colorado. This new airspace does not affect any single minority group and overlies a wide variety of socioeconomic conditions.

459

17780 Canterbury Drive
Monument, Co. 80132
May 23, 1996

Air National Guard Readiness Center
Program Manager, CAI-EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrew AFB, MD 20762-5157

To whom it may concern:

Thank you for the copy of the Draft Environmental Impact Statement for the Colorado Airspace Initiative.

After careful review, I am unable to support the conclusions drawn in this document. I believe that this proposed airspace expansion is unnecessary and would SIGNIFICANTLY as well as DETRIMENTALLY affect the residents, livestock, wildlife and economy of south central Colorado. I am therefore against this proposed expansion of the Airburst and La Veta MOAs. 1

Thank you for your time.

Sincerely,

Elizabeth A. Hibala

Elizabeth A. Hibala

RESPONSES TO COMMENTS

Response to Comment No. 1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

460

15050 Sherman Way
Unit #116
Van Nuys, CA 91405
May 23, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

Sir:

Please let me take this opportunity to strongly object to the Colorado Airspace Initiative and any attempt to increase the number of sorties in the affected areas!

I have read the Draft Environmental Impact Executive Summary and find its conclusions highly questionable. If the no-action, original, and preferred alternatives all provide for a win-win situation why is this issue even coming to the table and more importantly, why has the government wasted $1.5 million tax dollars funding it?

The summary is filled with Double-Speak which attempts to paint a very pretty picture but fails to present the facts clearly. It is obvious that an increase of just one sortie would have an impact! Many questions come to mind but here are a few which particularly anger me.

- If the military is downsizing, why do we **need** more overflights? 1
- Why was the methodology used in assessing impact not explained?
- Why were the noise averaging techniques used hidden or conveniently omitted from the summary? 2

Finally, what recourse does the public have if any of the sortie parameters are violated? Does the government guarantee its figures? 3

I do not want another peaceful environment spoiled by excessive government interference! The only acceptable solution is the elimination of Airburst MOA, LaVeta MOA and all MTR's leading to the Airburst Range. 4

Firmly and Respectfully,

Michael F. Mihalyo

RESPONSES TO COMMENTS

Response to Comment No.1

Training for potential military conflict in time of peace is a reality recognized by the Congress and the President. As military forces are cut back, the quality of training for existing forces must be maintained and improved to ensure our nation has an effective military. As the active duty military force is reduced in size, the ANG role and the role of the 140 WG in the total force structure is increasing. Over the past several years, the DOD has conducted studies to evaluate mission readiness and cost effectiveness of its total force. In comparison to DOD regular components, the ANG has relatively low operating costs and provides a cost effective investment.

Response to Comment No.2

The methodologies used for the analyses associated with each resource area addressed in the EIS are presented in individual subsections in Section 4 of Volume I. Some of these analyses are supported by technical appendices in Volume II.

Response to Comment No.3

No additional sorties will be conducted in the existing or proposed airspace without additional supplemental environmental analyses.

Response to Comment No.4

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

Greg & Marla Purcelley
2640 Lowell Blvd.
Denver, CO 80211-4068
303-458-1182

May 23, 1996

Program Manager, CAI EIS
ANGRC / CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

Dear Sirs;

My husband and I are outraged at the fact that the Air National Guard, without any consideration for the people or the natural creatures that habitat the Custer and Huerfano Counties, is taking the air space above our homes to use as military operations areas.

An individual in this country is guaranteed certain rights and when those rights are overlooked by a person that we voted into office, that has the power and thinks that such an intrusion of our air space is a good thing should have their motives examined. What is such a person getting out of this? The wild life and my family are getting nothing.

There are quite a few points we would like to bring to your attention:

- ✓ What happened to our right to vote on this matter?
- ✓ We are not at war, why cant the site in Nevada be used? It is already established and fully functional? Your need for expansion into the Front Range of Colorado is unwarranted and unwanted.
- ✓ Your standard of 65 decibels "over a 24 hour average as an acceptable level" is ridiculous for the open spaces concerned. One flight of one commercial airline in the existing flight paths drowns out the sound of the wind blowing at 25 mph. That noise level last for a full three to four minutes per flight. 17,000 flights per year = 40 flights per day, imagine the low-level flights at 600 mph and the noise pollution that will be generated from those flights. I refuse to have an air show in my backyard. — 1
- ✓ Just to show you what 65 decibels sounds like, it is identical to driving on the highway in a convertible with the top down at 70 mph. Would you like to listen to that 40 times per day? — 2
- ✓ The weather patterns in our valley will change drastically, effecting all vegetation and wildlife migration patterns. Your turning our valley into one more place the wildlife cannot live peacefully.
- ✓ The endangerment of livestock due to wildlife migration will in turn cause competition for food, loss of stock and feed. The production levels and quality of products generated by our Ranchers and Farmers will be — 3

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RESPONSES TO COMMENTS

Response to Comment No.1

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Response to Comment No.2

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

hindered, thus causing economic hardship on the Ranchers and Farmers that the population depends upon so greatly.

✓ Along with the noise pollution your creating also remember that those jets don't fly by magic, the exhaust left behind by your aircraft will be constantly emitting fumes into the clean air we presently possess. The idea of turning our air into something you can see feel, or smell is reprehensible. 4

✓ You also have to realize that your air seizure will not stop there, eventually you will migrate to the land itself, for several million reasons.

a. To rescue, retrieve or service any fallen aircraft. Which gives us the danger of fires, the debris left behind and the toxins that will spill into our soils.

b. Which in turn, damages our lands, invades our privacy which is our right to have, scares away the wildlife, damages the eco systems, and drains our natural resources. 5

History has repeatedly shown us the damage that interference with nature can cause. The sad part is that nobody ever learns. Military operations area will not be limited to just the sky, you and I both know that.

The noise and exhaust fumes from your jets will just be the beginning. Next will come environmental testing of substances, air to ground missile training, ground to air missile training, physical training, low level flying tactical training and a host of others.

Then of course you will need support for the above mentioned disasters and training sessions, which entails bringing in hundreds of personnel onto our lands, observers, trainees, and of course, the politicians who will tell us how much we need this. There would be no limit to the amount of people with access to our private lands. 6

With the influx of people the following effects on our valley will be tremendous and irreversible.

✓ Wildlife migration, reproduction, and life spans will be greatly reduced due too the constant invasion of territory, roads being built, reduction in food supplies, nesting habitats, and not to mention the aggression of wildlife the current land owners will have to deal with.

We want the government to prove to us, the law biding, tax paying citizens, that what you are doing is of benefit to us and the valley that we love so dear. With all the existing military operation areas already in use, we must insist you keep your training in those places you have already eradicated of wildlife and people.

Adamantly Concerned,

Mr. & Mrs. Greg Purcelley

cc: Custer County Action Association
Governor Roy Romer
Senator Hank Brown
Congressman Scott McInnis
Senator Ben Nighthorse Campbell

RESPONSES TO COMMENTS

Response to Comment No.3

Studies conducted on wildlife have shown that numerous wildlife species have the ability to adapt to the presence of man and various man-made sound sources, including jet aircraft noise. While the noise generated from low-altitude military overflights may be initially startling, habituation to jet aircraft noise occurs with most wildlife species. Species-specific responses to low-altitude overflights vary considerably, and responses from individual animals may have the potential to cause injury. However, wildlife populations are usually affected only when a variety of factors work in combination to impact them, including declines or fluctuations in the availability of a food source, habitat destruction or alteration, predation, hunting, trapping, poaching, disease, or inclement weather, rather than noise alone. Normally, it would be unrealistic to predict or attribute any wildlife population declines to a single stressor, such as noise. In addition, no published scientific evidence was identified that indicated harm may occur to wildlife as a result of exposure to the levels of noise generated by military aircraft that would utilize the airspace associated with the Colorado Airspace Initiative.

Response to Comment No.4

The EIS evaluated aircraft air pollution resulting from each of the alternatives studied in the EIS using scientifically validated emissions modeling tools designed to predict ground-level pollutant concentrations. The total air pollution emissions from the 140 WG would be reduced under the Preferred Alternative and the Original Proposal as compared to existing conditions, because the total number of flying hours would be reduced from 5005 to 4600 hours. The cumulative air pollution concentrations, as determined through computer modeling for each of the airspace segments, could increase or decrease depending upon a variety of factors. These factors include the type of aircraft using the airspace, their altitude, frequency, power setting and meteorological conditions rather than a strict proportional relationship to the number of sorties flown. Nonetheless, under the worst case scenario modeled for each airspace segment under each of the alternatives, no air pollution concentrations resulting from aircraft operations would cause any local area to be out of compliance with Federal or state standards or make any significant impact on air quality in any area. Also, when comparing these air pollution concentrations with Federal and state limits for the Prevention of Significant Deterioration (PSD) in air quality, all levels were far below minimums.

Response to Comment No.5

Initial response to an aircraft accident is the responsibility of the civilian authorities nearest the crash site, who would provide emergency services such as fire, police, and medical assistance, as necessary. It is the responsibility of the civilian unit responding to an aircraft accident to determine what response actions they are capable of performing, including the evaluation of proper personnel training and response equipment. If the responding unit is not capable of performing certain response actions, they should request assistance from the nearest civilian unit capable of performing the required response. In the event of an aircraft accident, the nearest USAF installation would be notified by these authorities. In most cases, the nearest USAF installation would have been previously notified by the USAF unit associated with the downed aircraft. Upon notification of the aircraft accident, the commanding officer of the nearest USAF installation dispatches a Disaster Response Force. The Disaster Response Force includes personnel who have been trained to respond to this type of occurrence, and would include disaster preparedness, security police, medical, fire department, legal, munitions, mortuary, and others as required. The Disaster Response Force would assist local response teams in matters of fire suppression, site security, medical treatment and evacuation, accident evaluation and investigation, retrieval of classified materials or equipment, and protective measures, such as munitions disposal and hazardous/toxic materials protective measures. When necessary, the Disaster Response Force would coordinate activities with other regional response forces to ensure all personnel and equipment are obtained for proper mitigation and control of the accident site. It is the ANG policy to provide training, upon request, on aircraft accident emergency response to any recognized emergency response agency.

Response to Comment No.6

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

May 23, 96

To whom it may concern;

my husband & I would like all parties concered that we disagree with the DEI statment that MOA's have no significant impact on those of us who live in Fremont County. We said "it does." The reason we moved to 35 acres outside of Canon City was so we could have peace & quiet & no aircrafts overhead.

We will vote against all people who are behind this plan-

Sincerely

Mr & Mrs John Read

1

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RESPONSES TO COMMENTS

Response to Comment No.1

There would be some changes in sortie numbers, noise levels, and airspace dimensions under the Original Proposal and the Preferred Alternative addressed in the EIS. However, overall flying hours of the 140 WG will be reduced from 5005 hours to 4600 hours. When compared to existing military aircraft training in the study area, these changes would not change the current levels of solitude and peace and quiet experienced by residents. As under current conditions, noise from military aircraft operations may periodically disturb citizens and affect their enjoyment of solitude; however, opportunities for abundant periods of total peace and quiet would continue as under present conditions.

May 23 96

To whom it may concern;

We recently purchased acreage in the country so we could have peace & quiet and now they have decided to have maneuvers overhead. We are against this & will vote against anyone who stands behind this plan. 1

The noise does have an impact on all concerned, please re-consider this plan. 2

Sincerely,
Mr & Mrs John Reed

465

RESPONSES TO COMMENTS

Response to Comment No.1

Because of the many avenues through which the public has received information on the CAI, including both factual and nonfactual information from various sources, some confusion may exist about the existing airspace and proposed new airspace, particularly for the Wet Mountain Valley and the San Luis Valley. The La Veta MOA is an existing airspace. No changes are proposed for this airspace.

VR-413 is also an existing airspace; however, under the Preferred Alternative, its width would be reduced in size and its eastern boundary moved away from the Sangre de Cristo Mountains. The minimum altitude would be raised from surface level to 500 feet above ground level. VR-412, which is currently a low-altitude route through the Wet Mountain Valley, would be eliminated altogether under the Preferred Alternative, thus eliminating low-altitude training completely from the Wet Mountain Valley. Sorties over the Wet Mountain Valley also are reduced under the Preferred Alternative.

Response to Comment No.2

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

P.O.Box 898
Westcliffe, CO 81252
May 23, 1996

Program Manager, CAIEIS
ANGRC/CEVP
35 Fetcher Avenue
Andrews AFB, MD 20762-5157

Re: Colorado Airspace Initiative--Draft Environmental Impact Statement

Dear Sir:

This is to express not only my feelings, but the feelings of all 15 members of my family regarding the proposed military training routes of the new Air National Guard over the Wet Mountain Valley.

Several years ago our family decided to move to Colorado. We chose Custer County, Colorado, for reasons of health, peace, quiet, and general enjoyment. We all have enjoyed the serenity of our home in the Wet Mountains. Health has been and is being restored. I do not think I can stand the noise level that so many jets can cause over and around my home. It sits at an elevation of 9,000 feet and is largely glass. Deer and other wildlife come around our home all the time. This is a part of the tranquility we enjoy. If we are forced to sell it because of your military action, we will be severely punished financially. 1

Members of my family have invested many years in our Country's military, which we honor and respect. We sincerely hope you, as a tax-supported institution, will respect our rights as citizens, land owners and tax payers and not invade the peace and tranquility for which we have paid so dearly. 2

Very sincerely yours,

Vivian W. Reed

Vivian W. Reed
(Mrs. L. M.Tipton Reed)

CC: Custer County Action Association
P O. Box 552
Westcliffe, CO 81252

Governor Roy Romer
136 State Capital Bldg.
Denver, CO 80203-1792

Congressman Scott McInnis
512 Cannon Office Bldg.
Washington, DC 20515-o603

Senator Hank Brown
716 Hart Senate Office Bldg.
Washington, DC 20510

Senator Ben Nighthorse Campbe
3880 Russell Senate Office Bl
Washington, DC20510

RESPONSES TO COMMENTS

Response to Comment No.1

There would be some changes in sortie numbers, noise levels, and airspace dimensions under the Original Proposal and the Preferred Alternative addressed in the EIS. However, overall flying hours of the 140 WG will be reduced from 5005 hours to 4600 hours. When compared to existing military aircraft training in the study area, these changes would not change the current levels of solitude and peace and quiet experienced by residents. As under current conditions, noise from military aircraft operations may periodically disturb citizens and affect their enjoyment of solitude; however, opportunities for abundant periods of total peace and quiet would continue as under present conditions.

Response to Comment No.2

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

May 23, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

RE: Colorado Airspace Initiative
Draft Environmental Impact Statement
MOA

We own property in Custer County, and plan to build our home there in the future.

We are very concerned about the proposed training flights over our valley. One of the main reasons for living in such an area as Custer County is the peaceful and quiet atmosphere. We feel the many flights will definitely change that. The quiet days and nights will be gone. The noise will not only affect the residents, but the wildlife will move from the area. 1,2 3

The property values will definitely go down because of the risks of crashes, forest fires, and all other detrimental environmental effects. The noise factor will play a big part in property value. 4

We are not against the training for the safety of our country, but we believe it can be done in lower populated areas. 5

We sincerely hope you reconsider.

Richard K. Tomsick
Evelyn J. Tomsick

Richard K. Tomsick and Evelyn J. Tomsick

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RESPONSES TO COMMENTS

Response to Comment No.1

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Response to Comment No.2

As stated in the Draft EIS, flights may occur in LaVeta MOA up until 10:00 p.m. Flights also will not enter this MOA prior to 7:00 a.m.

Response to Comment No.3

Studies conducted on wildlife have shown that numerous wildlife species have the ability to adapt to the presence of man and various man-made sound sources, including jet aircraft noise. While the noise generated from low-altitude military overflights may be initially startling, habituation to jet aircraft noise occurs with most wildlife species. Species-specific responses to low-altitude overflights vary considerably, and responses from individual animals may have the potential to cause injury. However, wildlife populations are usually affected only when a variety of factors work in combination to impact them, including declines or fluctuations in the availability of a food source, habitat destruction or alteration, predation, hunting, trapping, poaching, disease, or inclement weather, rather than noise alone. Normally, it would be unrealistic to predict or attribute any wildlife population declines to a single stressor, such as noise. In addition, no published scientific evidence was identified that indicated harm may occur to wildlife as a result of exposure to the levels of noise generated by military aircraft that would utilize the airspace associated with the Colorado Airspace Initiative.

Response to Comment No.4

In order to address concerns regarding possible devaluation of real estate, the EIS evaluated historical data for property values. This analysis compares counties within the study area for the CAI, including those areas with currently utilized military airspace, to counties outside the study area. The results indicate that all counties experienced increases in property values. Further, in terms of median property values, counties within the study area for the CAI increased 99.71 percent compared to counties outside the study area, which increased 57.74 percent. Whereas a report published by the Federal Aviation Administration concludes "that noise has been shown to decrease the value of property by only a small amount--approximately 1 percent decrease per decibel (DNL)," this analysis applies to airport/airfield environments and not land areas underlying military training airspace. Therefore, although it is not possible to absolutely conclude that counties experiencing military aircraft overflights incur any greater change in real estate values than counties not experiencing similar overflight activity, it is not likely that real estate values would drop as a result of the CAI.

Response to Comment No.5

The use of other training areas was examined as part of the development of the alternatives studied in detail in the EIS in Subsection 2.3. The proposal was designed to minimize conflicts with potentially sensitive areas while providing the training resources necessary to meet military readiness requirements. Specific narrowing criteria for the selection of military training airspace (see Subsection 2.3.3 in Volume I) were used to evaluate other locations, and no alternative training areas were identified that could be substituted for the airspace configuration proposed in the alternatives studied in the EIS.

The primary user of the airspace included in the Colorado Airspace Initiative is the 140 WG based at Buckley Air National Guard Base in Aurora, Colorado. Because of limited resources and aeronautical constraints, virtually all of our nation's fighter units train in airspace that is within a "tank of gas" of the aircrews' base.

JOAN WALLACE
24010 N. SHAGBARK DRIVE
LAKE ZURICH, ILLINOIS 60047

May 23, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

Please be advised that I am strongly object to the proposed Air National Guard MOAs and MTRs over the Custer County Valley area in Colorado. 1

I left Chicago several years ago and moved to Lake Zurich to get way from O'Hare Airport noise. In 1988 I purchased property in Westcliffe, Colorado for the purpose of retiring to a peaceful community. I cannot imagine that MOA and MTR maneuvers will advantageously enhance my retirement lifestyle, my property value, or the wildlife. 2

I sincerely hope that this does not come to pass.

Sincerely,

Joan Wallace

Joan Wallace

CC: Custer County Action Associaton
P. O. Box 552
Westcliffe, CO 81252

Governor Ray Romer
136 State Capitol Bldg.
Denver, CO 80203-1792

Congressman Scott McInnis
512 Cannon Office Bldg.
Washington, DC 20515-0603

Senator Hank Brown
716 Hart Senate Office Bldg.
Washington, DC 20510

Senator Ben Nighthorse Campbell
3880 Russell Senate Office Bldg
Washington, DC 20510

RESPONSES TO COMMENTS

Response to Comment No.1

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Response to Comment No.2

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

May 24, 1996

Program Manager CAI-EIS
ANGRC / CEVA
3500 Fetchet Ave.,
Andrews AFB
Maryland 20762-5157

Sir;

From the information that has been made available to me, I gather that your desire to appropriate the airspace over La Veta, and Walsenburg for your "War Games" is deplorable.

The info Sir prior to stated this airspace in question is only "MODERATELY USEFULL", the Air Burst Range is "TOO SMALL" and is no longer acceptable to the new USAF standards. To say nothing of the fact that "WE" as a nation and especially a state are "ENVIRONMENTALLY SATURATED," with air use you proposing. 1

I am a Veteran of Korea - a Mash unit for 4 years and the noise from "REAL WAR GAMES", jet overs, choppers, gun fire are not something I think any of these people here need to hear, just so you can have fun with your "Games". I still hear these things in my sleep. 2

By the way - need I ask - "Who pays for all this fuel you'll be using during these "GAMES". 3

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RESPONSES TO COMMENTS

Response to Comment No.1

Because of the many avenues through which the public has received information on the CAI, including both factual and nonfactual information from various sources, some confusion may exist about the existing airspace and proposed new airspace, particularly for the Wet Mountain Valley and the San Luis Valley. The La Veta MOA is an existing airspace. No changes are proposed for this airspace.

VR-413 is also an existing airspace; however, under the Preferred Alternative, its width would be reduced in size and its eastern boundary moved away from the Sangre de Cristo Mountains. The minimum altitude would be raised from surface level to 500 feet above ground level. VR-412, which is currently a low-altitude route through the Wet Mountain Valley, would be eliminated altogether under the Preferred Alternative, thus eliminating low-altitude training completely from the Wet Mountain Valley. Sorties over the Wet Mountain Valley also are reduced under the Preferred Alternative.

Response to Comment No.2

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.3

Funding for ANG training flights in the airspace addressed in the EIS are a component of the overall operating budgets for the units using the airspace. These budgets are approved by Congress.

Response to Comment No.4

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

154L Nancy L. Brady

Everyone is aware that "Technology" is changing so much and so fast that what is in use today will probably be obsolete next week. This happens with PC Computers as well as any item or unit used by the Military, from a paper clip to a Space Rocket.

Should you receive the OK to go thru with this, you and only you will benefit from this action.

We on the other hand will get the noise, all our wild life run off, and a constant worry as to when one of your game mates will end up in one of our back yards, school yard, main street or where ever.

Your not needed, not wanted, not necessary.

So, WE DO WE DON'T WANT YOU !!

Nancy Grady
103 West 3rd St
#6
Walsenburg
Colorado 81089

4

471

658 Furman Way
Boulder, CO 80303
May 24, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

To the Program Manager,

This is to dispute and oppose the ANG DEIS for its proposed expansion of the Airburst and LaVeta MOAs. This issue has been simmering for years in Colorado. For you to say there will be "no significant impact" is ridiculous, if not stupid!

On 5/20/96 at 1320 and 1325 hours, and on 5/22/96 at 1519 hours, a delta wing/tail fighter buzzed our neighborhood. It was a reminder of noise generated by commercial aircraft with westward departures from Stapleton and now Denver International Airports. This noise is reflected and amplified by the nearby rock formations called the Flatirons. 1

The use of the Ldn noise metric as the measure of airplane noise for outlying communities is extremely inappropriate. The Ldn metric does not reflect accurately the noise impacts from single (that turn into multiple) overhead flights. Sudden intense bursts of noise, particularly from low-flying military aircraft at 130 dBA, are certainly disruptive to the well-being of the environment, livestock, individuals wildlife, and result in a depreciation of private property. 2

There should be a reassessment of the "no significant impact" conclusion in the DEIS. As a minimum the SEL metric should be used.

Yours truly,
Donald V. Glen

4772

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

Dr. Lawrence F. Harris
POB 142
La Veta, CO 81055

24 May 1996

Dear Msgt. Katherine Jones,

Enclosed please find my public and written comment regarding the Colorado Airspace Initiative which was given in Alamosa, Colorado on May 14, 1996.

I feel that the Draft Environmental Impact Statement (DEIS) on the Colorado Airspace Initiative is a travesty and in direct violation of the National Environmental Protection Act (NEPA). The Colorado Air National Guard has never legally established their need for increasing their airspace and consequently this DEIS should never have been completed until a need was determined. This DEIS has been a tremendous waste of taxpayers' time and money ($17 million)!

The final Environmental Impact Statement (EIS) should not be allowed to proceed until the Air National Guard legally determines their needs and the violations to NEPA are addressed.

I request your assistance in this matter. Thank you for your consideration.

Sincerely,

Lawrence F Harris

Dr. Lawrence F. Harris

Encl.

Re: Ahlquist, Dale--Response to the DEIS of the CAI
ANG _____ Executive Summary of the DEIS for the CAI by the AN
ANG _____ The DEIS for the CAI

ANG Colorado Air National Guard
DEIS Draft Environmental Impact as required by NEPA
CAI Colorado Airspace Initiative (the project desired by the ANG)
EIS Final Environmental Impact Statement
NEPA National Environmental Protection Act, the law that requires the DEIS & EIS process

How to obtain or get information about these documents, write:

Dale Ahlquist
National Airspace Coalition
POB 394
Chanhassen, MN 55317
(612)949-3301

Custer Co. Action Assn.
POB 552
Westcliffe, CO 81252
(719)783-2061
Bob Senderhauf

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Statement: I am Dr. Larry Harris, Environmental Geologist. I am a graduate of the University of Colorado in Boulder (BA, 1967) and the Johns Hopkins University in Baltimore, MD (Ph.D, 1972). I have lived in La Veta for over 16 years. I chose to live here because there is a special quality of life resulting from our exceptional natural environment.

If the ANG has its way, the quality of life in this region as well as the financial investment that we've all made here will be seriously affected. For example, here is how the CAI will affect the La Veta ar[illegible]

The Guard states in their DEIS (ANG Summary p.15 Table S-2) that there will be at least 1100 flights per year in the La Veta Area. This means there will be a minimum average of two hours of flights per day at a sound level of 100 dB or more (pain threshold--130 dB) and that is if the planes are flying at an altitude of 2000 feet. In reality, these flights will be much lower in elevation, sometimes as low as 300 feet where the noise heard will be even louder (Ahlquist p.4) 1

Can you imagine 4 hours of flights per day at 100 dB or more where you live? That's what is stated in the Mandatory Criteria of the USAF Airspace Master Plan (see p. 7, ANG Executive Summary)

There are going to be even more flights for us, than I've already indicated, because 5 MTR's converge in the La Veta MOA. These extended periods of flights at high noise levels will be detrimental to the psychological and physical environments of both people and animals, will depreciate the value of our land, will adversely affect tourism and ranching, two of the most important resources in our region. Also affected will be the $2 billion economy that the native wildlife provides in our National Forest and in our Wilderness Areas. (This is comparable to the income generated by the State's Skiing Industry. It doesn't make sense to fly jets in areas that would affect the skiing industry, similarly, it makes no sense to fly them where it will affect the economy derived from the State's indigenous wildlife. 2

The process that has brought us all together here is required by NEPA, the National Environmental Protection Act, a law that requires that the public be properly and legally informed about a project such as the CAI, that we will have access to the documents and sufficient time to respond to the DEIS. In addition, all comments and concerns generated by the public must be published, considered, and addressed by the ANG. The ANG and the company that it has hired has failed 3

RESPONSES TO COMMENTS

Response to Comment No.1

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Response to Comment No.2

The role of tourism in the local economy, and its impact from the alternatives associated with the CAI, have been studied in the EIS as a part of the evaluation of socioeconomic impacts. There are a number of factors, other than aircraft operations, that may affect tourism and the use of recreational areas, including weather, the proximity of other attractions in the area, and the economy. While it is possible that a tourist visiting an area may find an aircraft overflight to be annoying, no significant change to the tourist industry would be expected considering the fact that the majority of the CAI airspace has existed for many years and the relevant influences from military aircraft operations are not changing in the study area. The contribution of tourism earnings to total industry earnings was presented in the EIS for each airspace. In all instances, these values were very consistent with overall state levels of tourism earnings as compared to industry earnings.

to Comply with the Law. If the NEPA procedure is flawed as this one clearly is, the process will be legally challenged and the EIS process must be started all over again.

For example, although I requested the DEIS in writing on two separate occasions, I did not receive the document until May 10 '96, four days ago! That is not sufficient time to review and respond to the 600 page DEIS, and I have spoken with others who have not received or received late their copies of the DEIS either. (If this happened to you, put it in your statement and let your local Coalition know). This is just the "tip of the iceberg". In reviewing the summaries of the DEIS (one by Ahlquist of the Coalition, the other by the ANG)), it is clear that the Public's Concerns & Objections, including my own, have been virutally totally dismissed by the Guard without the proper consideration, as required by the NEPA. The GUARD IS IN VIOLATION OF THE NEPA PROCESS. Here are some more examples. Page #'s from Ahlquist.

1. The ANG has callously dismissed objections raised by numerous residents who testified during the scoping process and who also submitted written testimony. I properly requested the Guard to respond to the effect of fuel losses and other toxic wastes from planes, as well as the effects of crashes on groundwater quality. No response is given. (p.12)

2. Section 4.5 DEIS--After a cursory list of factors supposedly considered, each airspace component is listed by a paragraph along with the phrase "potential impacts would be negligible". No specific reasons are given that would validate a conclusion. This is typical of the entire DEIS! Conclusions are repeated in nearly all places where supporting data should be. When data is given it routinely outdated, incomplete, and improperly applied. The data does not justify the conclusions of the ANG. In this fashion, the Guard has concluded that there is no significant impact to our environment regarding aircraft noise, and negligible impact to cultural, socio-economic, visual and aesthetic resources. (p.13)

3. Sleep Interference (G 12). The Guard's Conclusion on sleep (p.18) interference is based on a Day-Night noise average. Specific noise events cause sleep arousal, not an increase in the average noise level.

4. The Guard dismisses the impact of crashes in the Regions affected by the CAI and places the burden on local services (p.20). They have "generously" offered to instruct local officials as to what-to-do, upon request. Case in point: the Wisconsin Crash in the summer of '95, the site still had not been cleaned up after several months (Source: WI Dept. of Natural Resources). (p.20)

5. The Guard says there will be no significant impact of crashes, even though the Guard acknowledges the migratory patterns of geese and ducks in the MOA's. Two recent crashes in Alaska and Tennessee involved a collision with geese and a hot-dog pilot. Accidents are inevitable, and it should be noted that crashes start fires. (p.20)

6. Low altitude flights can start fires with just a spark. Low-flying jets started at least 3 fires in 1993 & '94 in the Buenos Aires National Wildlife Refuge in New Mexico. Based on a survey of Refuge Managers, military overflights are the number one threat to animals in wildlife refuges. (p.20)

7. Although considerable evidence has been submitted that demonstrates the affect of overflights on domestic animals (i.e. horses, goats, cattle), the Guard states "no significant impact" (p.23). Riders are bucked off horses, a horse kicked itself to death. When U.S. troops were deployed in Bosnia and within 48 hours from the time that US C-17's began transports, milk production dropped about 20% in the state-owned

RESPONSES TO COMMENTS

Response to Comment No.3

The Council on Environmental Quality provides guidelines for the preparation of Environmental Impact Statements, and the review of EISs by the public and various government agencies. These guidelines direct agencies to "allow not less than 45 days for comments on draft statements" (Section 1506.10 of these guidelines). The comment period for the CAI Draft EIS officially opened March 29, 1996 with the Notice of Availability published in the Federal Register. The initial mailing of the statement to over 750 addressees was accomplished on March 20, 1996 prior to the NOA. The close of the comment period was initially published as June 5, 1996 (68 days), and then extended to July 12, 1996 (105 days).

Response to Comment No.4

The ANG cares about the people that live near their training areas and how they feel about the activity associated with training. The NEPA process is providing the ANG with an opportunity to hear exactly what the public feels about its proposal before any decisions are made. Every scoping comment and every comment on the Draft EIS sent to the ANG has been read and incorporated into the administrative record for the proposal. Public comments have provided a better picture of what subjects the public wanted addressed in the document and have enabled the ANG to improve the EIS by adding or expanding to discussions in the Final EIS. Examples of added or expanded discussions include human health effects, natural quiet, environmental justice, amongst others.

Response to Comment No.5

The potential effects of hazardous materials on the environment as a result of an aircraft accident are discussed in EIS Section 4.12.1.

Response to Comment No.6

The Subsection referred to, 4.5 - Visual Resources and Aesthetics, is presented in a format that is the same as all the other resource area subsections given in Section 4 of Volume I. General information associated with understanding the potential impacts associated with the alternatives is presented in a summary narrative given at the beginning of the subsection. Further discussions addressing the individual airspace components associated with each alternative provide an opportunity to add further details for individuals airspace components. When specific mitigations or other factors are associated with an airspace that would affect conclusions, in this case information associated with visual resources and aesthetics, then this additional detail is added. When no such additional information is appropriate, then the conclusion may rely solely on the summary discussions presented at the beginning of the subsection.

Response to Comment No.7

Individual sleep disturbances are caused by individual noise events. Multiple noise events can cause multiple disturbances. Ldn measures the combined total of all events, thus predicting the cumulative impact on sleep.

RESPONSES TO COMMENTS

Response to Comment No.8

Initial response to an aircraft accident is the responsibility of the civilian authorities nearest the crash site, who would provide emergency services such as fire, police, and medical assistance, as necessary. It is the responsibility of the civilian unit responding to an aircraft accident to determine what response actions they are capable of performing, including the evaluation of proper personnel training and response equipment. If the responding unit is not capable of performing certain response actions, they should request assistance from the nearest civilian unit capable of performing the required response. In the event of an aircraft accident, the nearest USAF installation would be notified by these authorities. In most cases, the nearest USAF installation would have been previously notified by the USAF unit associated with the downed aircraft. Upon notification of the aircraft accident, the commanding officer of the nearest USAF installation dispatches a Disaster Response Force. The Disaster Response Force includes personnel who have been trained to respond to this type of occurrence, and would include disaster preparedness, security police, medical, fire department, legal, munitions, mortuary, and others as required. The Disaster Response Force would assist local response teams in matters of fire suppression, site security, medical treatment and evacuation, accident evaluation and investigation, retrieval of classified materials or equipment, and protective measures, such as munitions disposal and hazardous/toxic materials protective measures. When necessary, the Disaster Response Force would coordinate activities with other regional response forces to ensure all personnel and equipment are obtained for proper mitigation and control of the accident site. It is the ANG policy to provide training, upon request, on aircraft accident emergency response to any recognized emergency response agency.

The ANG/DOD would be fully responsible for any soil, water, or groundwater contamination, property damage or destruction, and injury or death to persons caused as a result of an ANG/DOD aircraft accident. Awards resulting from this type of incident would be determined on a case by case basis. The ANG, DOD, or its designated agent would be responsible for full evaluation and remediation, if required, of any contamination at an aircraft accident site.

Response to Comment No.9

Because of the potential for loss of a pilot's life and the high cost of modern military aircraft, avoidance of collisions with birds is extremely important to the ANG. The potential for a bird-aircraft strike would not change significantly under the proposal. Both the Original Proposal Alternative and the Preferred Alternative consist largely of modifications to existing airspace or establishments of new airspace in the vicinity of existing airspace. These actions would, therefore, encompass the same seasonally adjusted bird avoidance procedures associated with the bird migration corridors as are utilized currently with the existing airspace. Due to the fact that only four bird strikes have occurred in existing airspace associated with the Colorado Airspace Initiative in the past five years, the likelihood of future bird-aircraft strikes under any of the alternatives would be expected to be low.

The USAF has established a Bird/Aircraft Strike Hazard (BASH) Team to implement procedures to prevent and reduce the threat of bird/aircraft strikes, and to investigate and track any bird strikes that occur. In addition, each USAF/ANG base or flying unit is required to establish a BASH program to minimize the risk of bird strikes both at the base airfield and in airspace training routes for the unit. The USAF BASH Team assists each base or flying unit by providing Bird Avoidance Model (BAM) graphs. These graphs estimate the relative bird strike risk for flying along a specific low-level route or operations area. The model is developed on the basis of waterfowl and raptor migration and concentration data. The BAM graph depicts the severity of the bird strike hazard at a particular time of day, month, and segment of a low-level route. This information is used by the flying unit to determine the optimum route schedule and avoidance measures to be taken to prevent bird/aircraft strikes. In addition, the unit publishes Notices to Airmen (NOTAM) to alert transient aircrews to specific bird migration hazards, activity periods, and avoidance procedures.

Response to Comment No.10

The F-16 aircraft and other aircraft associated with the CAI do not emit sparks during normal flight operations.

dairy located one mile from the Tuzla Airport. In Wisconsin, C-130's panicked goats and cattle, causing them to overrun fences, killing some, injuring others, and causing miscarriages. The ANG routinely pays damages to farmers whose animals are injured, killed, or experience miscarriages resulting from overflights. No significant impact? Hardly! FARMERS BEWARE! p. 1

8. Socioeconomic Resources. Once again the Guard states that there is negligible impact, even though two papers were properly submitted to the ANG as evidence, one by Eric Nickell, another by Prof. Wm. Weida of Colorado College. Both identify a serious detrimental economic impact to the affected Regions. Noise has been shown to decrease property value by 1% per decibel increase. Increase noise levels by 30 dB's and the property value will drop by 30% (note that dB increases are often much greater than 30 dB) (Source: FAA, 1985 Aviation Noise Effects)(p.. 12 13

9. In contrast to the insensitivity of the ANG with regards to Socio-Economic Resources in this region, is the Navy's EIS in Nevada, which presents clear, concise findings that support a Preferred Alternative that would greatly restrict the Navy's low-altitude training over public lands. (p.30). I quote from their EIS: 14

> "Residents of the area prefer small towns or isolated ranches and homes rather than metropolitan areas. Amenities they find beneficial include the natural quiet of rural areas, lack of human intrusion and free access to remote public lands. Recreational pursuits are usually centered on outdoor acitivies including camping, hiking, fishing, off-road vehicle travel, hunting and hiking....Military combat training overflights are currently an intrusion on the back-country, communities, homes and ranches. These overflights disturb the peace and quiet of the area that are so important to its residents and visitors." Source: Central Nevada Communication Sites Proposed Plan Amendment and Env. Assessment, March 1996 p.14)

The ANG would do alot better to follow their lead.

10. Preferred Alternatives. Not enough consideration was given other alternatives, even though other less-populated regions were rejected. Note that Airburst and La Veta MOA's were kept even though they failed to meet the minimum size requirements to satisfy their own criteria in the USAF Airspace Master Plan (p.3 ANG Summary). The Use of Simulators saves money, and eliminates flights that would affect our Areas. Why not consider Pinon Canyon which is already owned mostly by the Army. It doesn't have the extensive economic resources such as tourism and wilderness recreation that is found in the La Veta and Airburst MOA's. It is a better alternative for a new range area and would eliminate impacts from the La Veta and Airburst MOA's. 15 16

11. Then there is the matter that the ANG will allow out-of-state and even foreign flights over our regions--one-third of all flights will be in this category. 17

What can you do about this? Write your concerns to the ANG. They can be presented at this meeting (Alamosa--May 14) or they can be mailed directly to the ANG to the addresses provided on page 4 of this document. Also send your statement to the other individuals whose addresses are given in this document.

SUMMARY: The land Regions affected by the flight plans of the CAI remain among the last pristine rural areas in the U.S. ANY FLIGHTS OVER THESE AREAS WILL BE DETRIMENTAL TO THE WELL-BEING OF PEOPLE, ANIMALS, AND THEIR BUSINESSES. We need laws that govern military flights over Wilderness and Civilian Areas that protect the rights of animals and citizens. Sincerely, Dr. Lawrence F. Harris, Geologist

RESPONSES TO COMMENTS

Response to Comment No.11

It is possible that aircraft noise could startle domestic animals, including those in close association with humans, and cause injury to the animals or humans around them. However, animals have been shown through numerous studies to adapt and habituate to various sound sources, including jet aircraft noise. Because the CAI airspaces involved where humans and domestic animals are in close association are also mostly existing airspace that have been utilized for over 25 years, this adaptation and habituation to jet aircraft noise has likely already occurred.

Response to Comment No.12

Papers received during the scoping process, such as the documents written by Mr. Eric Nickell and Mr. William Weida, have been considered during the preparation of the Draft EIS. These papers, which were not from a published source and consequently not peer reviewed, were not used to support the analysis. Such unreviewed documents from stakeholders do not carry the same credibility as the many other sources of information available to the EIS preparers.

Response to Comment No.13

In order to address concerns regarding possible devaluation of real estate, the EIS evaluated historical data for property values. This analysis compares counties within the study area for the CAI, including those areas with currently utilized military airspace, to counties outside the study area. The results indicate that all counties experienced increases in property values. Further, in terms of median property values, counties within the study area for the CAI increased 99.71 percent compared to counties outside the study area, which increased 57.74 percent. Whereas a report published by the Federal Aviation Administration concludes "that noise has been shown to decrease the value of property by only a small amount--approximately 1 percent decrease per decibel (DNL)," this analysis applies to airport/airfield environments and not land areas underlying military training airspace. Therefore, although it is not possible to absolutely conclude that counties experiencing military aircraft overflights incur any greater change in real estate values than counties not experiencing similar overflight activity, it is not likely that real estate values would drop as a result of the CAI.

Response to Comment No.14

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.15

The use of other training areas was examined as part of the development of the alternatives studied in detail in the EIS in Subsection 2.3. The proposal was designed to minimize conflicts with potentially sensitive areas while providing the training resources necessary to meet military readiness requirements. Specific narrowing criteria for the selection of military training airspace (see Subsection 2.3.3 in Volume I) were used to evaluate other locations, and no alternative training areas were identified that could be substituted for the airspace configuration proposed in the alternatives studied in the EIS.

The primary user of the airspace included in the Colorado Airspace Initiative is the 140 WG based at Buckley Air National Guard Base in Aurora, Colorado. Because of limited resources and aeronautical constraints, virtually all of our nation's fighter units train in airspace that is within a "tank of gas" of the aircrews' base.

Response to Comment No.16

The use of flight simulators for pilot training is already part of the training program for various aircraft using the affected airspace. The F-16 training regulation (AFI 11-F16) stipulates those activities that may be accomplished using simulators and those requiring actual flying. Although flight simulators work well for certain types of training (e.g., emergency procedures and instrument training), the complete substitution of simulator training for all flight training is not a viable alternative. In addition, the availability of simulators for on-going readiness training is limited and not currently at the 140 WG.

Response to Comment No.17

All known users of the proposed Colorado Airspace Initiative training airspace have been identified in the document (see Appendix N). No additional aircraft will be permitted to use the proposed or existing training airspace without supplemental environmental analysis.

Copy

May 24, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

Sirs,

For more than 40 years our family has looked forward to the peace and quiet of the Wet Mountain Valley in Colorado and to our cabin on the Sangre de Cristo Mountains. It was a true relief from the congestion, noise and pollution of our home communities.

We strongly resent the Colorado Airspace Initiative. The occasional commercial planes over our "haven" are bad enough, but what you are proposing is death to life as we have enjoyed it all these years. -1

We urge you to eliminate Airburst MOA, LaVeta MOA and all other MTRs leading to the Airburst Range! -2

You say it will not affect us. That is ridiculous. To have the roar and reverberations of the noise many times a day will leave us no time for the peace and quiet and relaxation that we have enjoyed all these years. It also will destroy property values and the tourist business which helps to sustain Colorado as a natural wonderland. -3 -4

There is no reason to fly those planes over our area. There is plenty of sparsely populated land to the east of Colorado Springs, where there are few people and no hills to reverberate. We KNOW. For six years we lived under the flight pattern of McConnell Air Force Base in Wichita, and that sound was nothing compared to the repeated roars of the commercial planes over our mountains. -5

We invite you to come and experience the natural restful world of the mountains and listen to what airplanes do to it. -6

And we strongly object to any of your Military Training Routes there!

Respectfully,

Marjorie Matthaei

Marjorie Matthaei
110 W. 21st
Hutchinson, KS 67502

Copies to:
President Clinton and other involved officials.
Also sending to the two Kansas senators and Rep Pat Roberts

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RESPONSES TO COMMENTS

Response to Comment No.1

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Response to Comment No.2

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

Response to Comment No.3

There would be some changes in sortie numbers, noise levels, and airspace dimensions under the Original Proposal and the Preferred Alternative addressed in the EIS. However, overall flying hours of the 140 WG will be reduced from 5005 hours to 4600 hours. When compared to existing military aircraft training in the study area, these changes would not change the current levels of solitude and peace and quiet experienced by residents. As under current conditions, noise from military aircraft operations may periodically disturb citizens and affect their enjoyment of solitude; however, opportunities for abundant periods of total peace and quiet would continue as under present conditions.

156L Marjorie Matthaei

Response to Comment No.4

In order to address concerns regarding possible devaluation of real estate, the EIS evaluated historical data for property values. This analysis compares counties within the study area for the CAI, including those areas with currently utilized military airspace, to counties outside the study area. The results indicate that all counties experienced increases in property values. Further, in terms of median property values, counties within the study area for the CAI increased 99.71 percent compared to counties outside the study area, which increased 57.74 percent. Whereas a report published by the Federal Aviation Administration concludes "that noise has been shown to decrease the value of property by only a small amount--approximately 1 percent decrease per decibel (DNL)," this analysis applies to airport/airfield environments and not land areas underlying military training airspace. Therefore, although it is not possible to absolutely conclude that counties experiencing military aircraft overflights incur any greater change in real estate values than counties not experiencing similar overflight activity, it is not likely that real estate values would drop as a result of the CAI.

Response to Comment No.5

The use of other training areas was examined as part of the development of the alternatives studied in detail in the EIS in Subsection 2.3. The proposal was designed to minimize conflicts with potentially sensitive areas while providing the training resources necessary to meet military readiness requirements. Specific narrowing criteria for the selection of military training airspace (see Subsection 2.3.3 in Volume I) were used to evaluate other locations, and no alternative training areas were identified that could be substituted for the airspace configuration proposed in the alternatives studied in the EIS.

The primary user of the airspace included in the Colorado Airspace Initiative is the 140 WG based at Buckley Air National Guard Base in Aurora, Colorado. Because of limited resources and aeronautical constraints, virtually all of our nation's fighter units train in airspace that is within a "tank of gas" of the aircrews' base.

Response to Comment No.6

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

198 S. Cleveland Avenue
Louisville, CO 80027
May 24, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

Dear Sirs:

We are writing to express our deep concern over the impact of low-flying jet fighters in south central Colorado.

We support completely the need for our country's defense and proficiency to be first-rate, however we hope that the Air National Guard will consider relocating these maneuvers to less inhabited areas where the impact of noise levels on residents and wildlife will be minimized. 1

Several years ago, we were driving near Crestone, CO, and were startled by the sudden roar and appearance of a low-flying jet just above us. It was a moment of shock and fear we will not forget. Residents we spoke with seemed resigned to living under such jarring conditions and felt powerless to do anything about it. 2

We are very concerned about the quality of life that residents, visitors, and wildlife experience in the area of these combat maneuvers, and also about the potential impact on mountains and valley walls which grace our magnificent country. We respectfully ask that you instead utilize airspace over parts of eastern Colorado or other areas where the benefits of superior defense can be realized with far less disturbance to people, wildlife, and nature. 3 4

Yours sincerely,

Alan Myers D.V.M.
Tracey Myers

Alan Myers, D.V.M.
Tracey Myers

RESPONSES TO COMMENTS

Response to Comment No.1

The use of other training areas was examined as part of the development of the alternatives studied in detail in the EIS in Subsection 2.3. The proposal was designed to minimize conflicts with potentially sensitive areas while providing the training resources necessary to meet military readiness requirements. Specific narrowing criteria for the selection of military training airspace (see Subsection 2.3.3 in Volume I) were used to evaluate other locations, and no alternative training areas were identified that could be substituted for the airspace configuration proposed in the alternatives studied in the EIS.

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Response to Comment No.2

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.3

Many citizens have expressed concern that their quality of life, which is based directly on the kind of lifestyle that they can enjoy while residing in or visiting the State of Colorado, will be changed by implementation of the CAI. The U.S. Air Force, including the ANG, has been conducting military aircraft operations in the Wet Mountain Valley and the San Luis Valley areas where people are most concerned for approximately 25 years. Most of the military airspace proposed under any of the alternatives is currently in use. Commercial aircraft overflights have also been taking place and will continue to do so. Citizens may notice changes in military aircraft overflights in certain areas associated with the CAI. The number of sorties are proposed to increase moderately in portions of the study area and decrease in others. Overall sorties will be reduced from 5,441 to 4,909 under the Preferred Alternative. The bottom altitudes of several airspaces where citizens are most concerned have been raised to reduce noise levels. Therefore, existing quality of life should not be changed.

Response to Comment No.4

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

DORJE KHYUNG DZONG
Buddhist Retreat Center
Founded by Vidyadhara, the Venerable Chogyam Trungpa, Rinpoche

Gigi Dennis (State Senator)
247 E. Idaho Springs Drive
Pueblo West, CO. 81007

May 24, 1996

Dear Sir:

We are writing as Vice Presidents of Shambhala International, a organization of meditation and educational centers world wide. Currently, we are the Directors of the Dorje Khyung Dzong Retreat Center, located in Huerfano County, and are authorized to address you on behalf of the over 500 members of our organization in Colorado, as well as numerous people who come to our center from all over the world, who are solidly in objection to the proposed MOAs which will be flying in the LaVeta area, near where our center, along with another retreat center, (Shenpen Choling) is located. We, along with the Director of Shenpen Choling, and a Tibetan scholar, a close confident of His Holiness the Dalai Lama, spoke at the May 16th meeting in Westcliffe Colorado.

D.K.D. has been in existence for nearly thirty years, and Shenpen Choling for twenty, as solitary retreat centers for followers of several Buddhist traditions, including: Tibetan Vajrayana, Vipashyana, and Zen Buddhism. This specific area, approximately eight miles from Farasita, CO was chosen because of its isolation, its quiet, and other qualities conducive to solitary retreats. Buddhist teachers from all over the world send their students to do retreats here. **This area is sacred to us, in much the same way the Native Americans feel that their land is sacred. It has been blessed by many great teachers of the Buddhist tradition. Despite all of our protests and letters, no where in the research that went into the DEIS report, or the recent revision, is there even one word of our existence, or our concerns. In all this time, no one researching this area for the DEIS ever visited us to see who we are or what we are doing, and no one has taken even the slightest interest in our centers. No researcher came to ask if we hold large outside church programs, which we increasingly do, and which we were led to understand would make these low flying maneuvers actually illegal. We feel that this is a tremendous insult and demonstrates prejudice against our religion and culture.**

In addition to the our religious concerns, we are appalled that there is no mention of the impact on the wild life that we share the San Isabella National Forest with. While some studies were done on the impact of nesting birds, and domesticated Buffalo, no one looked into the response of the bears, the mountain lions, the bobcats, the coyotes, and many other animals living in this area, who are

1,2

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P.O. Box 131, 288 County Road 626, Gardner, Colorado 81040
Phone: (719) 746-2264 Fax: (719) 746 2997

48

RESPONSES TO COMMENTS

Response to Comment No.1

The EIS has evaluated cultural resources, such as historic or Native American sites, by consulting with the appropriate state representatives and local experts to obtain an understanding of the resources present in the study area and to determine whether any possible impacts exist. Some religious and/or meditation centers are under existing airspace.

Response to Comment No.2

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Response to Comment No.3

The ANG cares about the people that live near their training areas and how they feel about the activity associated with training. The NEPA process is providing the ANG with an opportunity to hear exactly what the public feels about its proposal before any decisions are made. Every scoping comment and every comment on the Draft EIS sent to the ANG has been read and incorporated into the administrative record for the proposal. Public comments have provided a better picture of what subjects the public wanted addressed in the document and have enabled the ANG to improve the EIS by adding or expanding to discussions in the Final EIS. Examples of added or expanded discussions include human health effects, natural quiet, environmental justice, amongst others.

already very stressed out by their loss of habitant and food. How do we know that these low flying jets won't feel like a direct attack to these animals making them aggressive and therefore dangerous

to those people we have in strict solitary retreats, and our neighbors who live with their families in this area. This situation warrants a careful study, but none was made.

We have no argument with the necessity of a military, and the necessity for the military to train. However, there are a number of factors that make this particular decision, namely to train in the La Veta area unnecessary. The report states that because of the smallness of the area, and the environmental saturation, LaVeta is not the best area. There are various alternatives to the LA VETA MOA, why aren't they being considered? Please, please do not go ahead with the LA VETA MOA and MTR as planned. 6

Respectfully submitted,

Melissa S Robinson and Bruce D. Robinson
Vice Presidents and Directors

C: Custer County Action Committee

P.O. Box 131, 288 County Road 626, Gardner, Colorado 81040

RESPONSES TO COMMENTS

Response to Comment No.4

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.5

Studies conducted on wildlife have shown that numerous wildlife species have the ability to adapt to the presence of man and various man-made sound sources, including jet aircraft noise. While the noise generated from low-altitude military overflights may be initially startling, habituation to jet aircraft noise occurs with most wildlife species. Species-specific responses to low-altitude overflights vary considerably, and responses from individual animals may have the potential to cause injury. However, wildlife populations are usually affected only when a variety of factors work in combination to impact them, including declines or fluctuations in the availability of a food source, habitat destruction or alteration, predation, hunting, trapping, poaching, disease, or inclement weather, rather than noise alone. Normally, it would be unrealistic to predict or attribute any wildlife population declines to a single stressor, such as noise. In addition, no published scientific evidence was identified that indicated harm may occur to wildlife as a result of exposure to the levels of noise generated by military aircraft that would utilize the airspace associated with the Colorado Airspace Initiative.

Response to Comment No.6

The use of other training areas was examined as part of the development of the alternatives studied in detail in the EIS in Subsection 2.3. The proposal was designed to minimize conflicts with potentially sensitive areas while providing the training resources necessary to meet military readiness requirements. Specific narrowing criteria for the selection of military training airspace (see Subsection 2.3.3 in Volume I) were used to evaluate other locations, and no alternative training areas were identified that could be substituted for the airspace configuration proposed in the alternatives studied in the EIS.

The primary user of the airspace included in the Colorado Airspace Initiative is the 140 WG based at Buckley Air National Guard Base in Aurora, Colorado. Because of limited resources and aeronautical constraints, virtually all of our nation's fighter units train in airspace that is within a "tank of gas" of the aircrews' base.

May 24, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

This is my second letter of protest to the Colorado Airspace Initiative.

I attended the open house meeting at Rangeview High School in Aurora, Colorado, on May 22, 1996. It is obvious to me that the noise study used as the basis of this Environmental Impact Statement is dead wrong. It cannot stand! It is totally illogical to use and apply the 24 hour averaging method in the noise modeling. This cannot account for the explosive effect of the fast low altitude maneuvers of jet aircraft or the effect of a multi-event of a four aircraft formation. 1

Do not confuse the public with this misinformation. This Draft Environmental Impact Statement cannot stand unchallenged. There are too many obvious errors, inaccuracies and wrong assumptions. The words "reasonable" and "rational" should not be included in this document. 2

The taxpayers bought the answers that the military wanted to hear at great expense. We demand and deserve logic as a basis of the Environmental Impact Statement.

The Draft Environmental Impact Statement is both technically and legally flawed. It does not meet the government's own criteria. It has avoided many critical issues and is technically unsound due to the methodology used to compute the sound levels. By avoiding the National Environmental Policy Act, this is an illegal Environmental Impact Statement. 3

As a taxpayer and property owner in Huerfano County, Colorado, I demand an investigation of these allegations.

Otto L. Smith
3402 South Dallas Court
Denver, Colorado 80231
(303) 755-2287

cc: Custer County Action Association
Governor Roy Romer

RESPONSES TO COMMENTS

Response to Comment No.1

Current practice is to add a "surprise effect" penalty of 0 to 11 dB for sounds with an onset rate between 15 and 150 dB/second. The penalty is based on the onset rate, dB/second, not on level, dB. Onset rate is a parameter independent of sound level, so comparisons of rates in terms of decibel ratios is not meaningful.

Response to Comment No.2

The research completed to support the preparation of the CAI EIS follows the use of various accepted scientific methodologies used to analyze pertinent potential impacts. These analyses have been prepared by qualified scientists and engineers who perform these services for a variety of customers, including the ANG.

Response to Comment No.3

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

INJOY
PRODUCTIONS

Friday, May 24, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Ave.
AFB, MD 20762-5157

Dear Manager:

I would like you to register my objection to the low altitude training proposed expansion at Airburst and LaVeta MOAs. I request that you cancel this expansion. 1

Sincerely,

Charlie Stein

3970 Broadway, Suite B4 ■ Boulder, Colorado 80304
Phone 303-447-2082 ■ FAX 303-449-8788

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RESPONSES TO COMMENTS

Response to Comment No.1

The Colorado Airspace Initiative is not an expansion of airspace, but rather a modification. In many cases, this modification actually results in a reduction of airspace and/or number of sorties flown. The need for the Colorado Airspace Initiative is presented in Subsection 1.3 of the EIS.

Raymond S. Stillwell

Attorney at Law
Parkway Professional Building
112 W. Homer Adams Parkway
P.O. Box 8063
Alton, Illinois 62002
Tel. (618) 467-4000
FAX: (618) 466-2368

May 24, 1996

Program Manager, CAIDEIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews, AFB, MD

RE: Colorado Airspace Initiative Draft Environmental Impact Statement

Dear Sir or Madam:

I am very concerned that the DEIS would show a finding of "No Significant Impact" after all the data which concerned citizens have supplied to the Air National Guard which demonstrated the adverse effects of low-altitude training in this setting, and all the objections which were made from a wide variety of concerns: businesses, farmers, tourists, homeowners, veterans, religious organizations, aviation groups, environmentalists, chambers of commerce, city and town councils. The opposition has been strong and consistent, and yet, the DEIS says that such concerns are "subjective." 1

The most obvious problem with the DEIS is that almost all of its conclusions are based on one remarkably inadequate type of noise analysis: Day-Night Averaging. This area is incredibly quiet. The ambient noise levels in some parts of the valley are 30 decibels. The only sound you hear is rustling leaves. If a jet suddenly flies over a 110 decibels, the *average* noise levels, over a 24 hour period, has only gone up a little bit, far below the level of 65 decibels, which is the cutoff point used in the EIS. Where did the level of 65 decibels come from? The Federal Interagency Committee on Noise (FICON) says that an average noise level above 65dB is annoying *for communities next to commercial airports*. The DEIS admits that the Region of Impact here is not the same kind of area as a community next to an airport, and yet it uses the same standard of 65 decibels over a 24 hour average. The DEIS uses the same guidelines for evaluating the effects of these military overflights on wildlife, domestic animals, hikers, trailriders, recreationists, and residents. 2 3

It is a farce to use this standard and this type of analysis in this setting. The Air National Guard has chosen a standard where the results are a foregone conclusion. Even the Onset Rate Adjustment, which attempts to "penalize" sudden loud noises, does not alter the conclusion. 4

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RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

My wife and I have invested much of our time, effort and available funds into the subject area, and the sonic booms and related noise from military overflights will have a devastating effect on the use and value of these investments as well as the residential habitability. 5

The Final EIS must take things into account before a Record of Decision is issued.

Very truly yours,

Raymond S. Stillwell

Raymond S. Stillwell

RSS:kms

cc: Custer County Action Association
PO Box 552
Westcliffe, CO 81252

Governor Roy Romer
136 State Capital Building
Denver, CO 80203-1792

Senator Hank Brown
716 Hart Senate Office Building
Washington, DC 20510

Congressman Jerry Costello
2454 Rayburn
Washington, DC 20515

Congressman Scott McInnis
512 Cannon Office Building
Washington, DC 20515-0603

Senator Ben Nighthorse Campbell
3880 Russell Senate Office Building
Washington, DC 20510

Congressman Richard Durbin
528 S. 8th Street
Springfield, IL 62703

Senator Paul Simon
SD-462 Dirkson Senate Office Building
Washington, DC 20510-1302

Response to Comment No.3

The approach used in the EIS has been modified. The Federal Interagency Committee on Noise (FICON), representing a variety of Federal agencies with a mix of concerns associated with aircraft noise, reviewed aircraft noise analyses issues in 1992. This committee's report (FICON 1992) continued an approach to evaluating relative impacts associated with aircraft noise that has been recognized by noise analysis experts as the most widely endorsed and comprehensive approach to aircraft noise analysis available. This approach to noise analysis was incorporated into the analyses associated with the Draft EIS. In general, Federal land use compatibility criteria are derivatives of guidelines first devised for land near airports. All land use compatibility is based on the use of Day-Night Average Sound Level (abbreviated as DNL or Ldn) as the descriptor representing community noise environments. The criteria treat areas below DNL 65 dB as compatible for all uses, including residential, and they treat DNL 65 dB as a threshold for significant exposure. There is no generally accepted method for treating rural areas differently for these purposes.

However, many EIS reviewers, including some members of the Federal regulatory community, felt the application of the FICON standards, and the 65 dB threshold, to a rural setting was inappropriate for such areas with more quiet ambient noise conditions. Consequently, the use of the 65 dB threshold as the sole means to assess relative impacts or the acceptability of noise levels associated with aircraft operations addressed in the EIS has been modified and the analysis now includes additional information to evaluate potential impacts.

Response to Comment No.4

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.5

In order to address concerns regarding possible devaluation of real estate, the EIS evaluated historical data for property values. This analysis compares counties within the study area for the CAI, including those areas with currently utilized military airspace, to counties outside the study area. The results indicate that all counties experienced increases in property values. Further, in terms of median property values, counties within the study area for the CAI increased 99.71 percent compared to counties outside the study area, which increased 57.74 percent. Whereas a report published by the Federal Aviation Administration concludes "that noise has been shown to decrease the value of property by only a small amount--approximately 1 percent decrease per decibel (DNL)," this analysis applies to airport/airfield environments and not land areas underlying military training airspace. Therefore, although it is not possible to absolutely conclude that counties experiencing military aircraft overflights incur any greater change in real estate values than counties not experiencing similar overflight activity, it is not likely that real estate values would drop as a result of the CAI.

Program Manager
CAI EIS
3500 Fetcher Avenue
Andrews AFB, MD
20762-5157

May 24, 1996

Dear Sirs:

I am writing to urge you to not permit the Colorado Air National Guard to conduct low altitude fighter combat maneuvers over the La Venta area in south central Colorado. The noise level (exceeding 130 decibels) would frighten and disturb wildlife and farm animals. More importantly, it would destroy the pristine quiet that hikers and backpackers seek when they go into the wilderness. 1

This area is not essential to the training of Air National Guard pilots. The natural environmental values that would be lost far outweigh any slight benefit the Guard might gain. 2

Thank you for you consideration of my views and concerns.

Sincerely,

Gary M. Wederspahn

Gary M. Wederspahn
4838 W. Moorhead Circle
Boulder, CO 80303

RESPONSES TO COMMENTS

Response to Comment No.1

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Response to Comment No.2

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

5/25/96

James Vann Adams, Jr.
948 Tulip St.
Longmont,CO 80501-4143
(303) 772-9377

Program Manager, CAI/EIS
ANGRC/CEVP
3500 Fetchet Ave.
Andrews Air Force Base
Maryland 20762-5157

Gentlemen:

Re. The planned "MOA" in Southern Col·

Even though your Draft EIS concludes,"No significant Impact" from the Planned "MOA", I am afraid this statement of conclusion is Erroneous.

In an area such as you plan to cover with the "MOA" the existing Ambient Noise Level is quite low, ranging in the mid-to-high Teens. That low level, disrupted by Crickets, Bird Calls, and Coyotes Howling , is a level to be desired by the residents.

The low Back Ground Level causes the Impact of the Aircraft that pass over to be even more Detrimental during their passage.

I am a former Naval Aviator having had experience with Jet Fighter Aircraft since they had straight wings in the Korean Conflict.

Please keep in mind that it is now a requirement of OSHA that Ground Crew Personnel working around Jet Aircraft at our Airports Wear Hearing Protection Devices. It is also a requirement the the Employers test the hearing of these Employees to monitor the hearing loss of these "Protected" Ears Due to Noise Exposure. Understand, if you will, that the Ground Crews are working around these Jets when they are not operating at Maximum Power; therefore, they are not Generating the "Threshold of Pain" Noise Levels that happen during Take-off and at performance power levels.

Some time ago, Jet service into Yellowstone was Declined because of the noise level that would be generated by the so-called Quiet 737 Jet Aircraft, on such a "Pristine" Area. More Recently we have seen Democrat(David Skaggs), Republican(Wayne Allard), and Lawyer, Politician, DOT Secretary Federico Pena, Stand together against the Proposed Helicopter Tours over Rocky Mountain National Park due to the Noise Impact on such a "Pristine" Area. Thus, Protecting Elk, Deer, and other Wildlife, in addition to Park Visitors from the Impact of Noise.

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RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

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Response to Comment No.3

The 140 WG cannot reasonably use airspace associated with the White Sands Missile Range since the range distance would require in-flight refueling for every flight. Such an approach would be extremely expensive and impossible to implement from a fiscal standpoint.

Response to Comment No.4

Colorado's Noise abatement statute, 25-12-101 et seq., is not applicable to the CAI. The Colorado law specifically states that "This article is not intended to apply to the operation of aircraft or to other activities which are subject to federal law with respect to noise control." 25-12-103(4)

5/25/96

James Vann Adams, Jr. to Program Manager CAI/EIS page two.

The concluding question must be, Is the area under the Proposed "MOA" any less "Pristine" than those mentioned previously? Do the permanent Residents of this area not Deserve to have their Peace and Quiet protected from the Impact of Extremely High Levels of Jet Aircraft Noise? Of course they do. 2

As an alternative, let me suggest that the Air National Guard use the existing Restricted Airspace over the White Sands Missile Range as their "MOA". It isn't that far distant by Jet, and it is not being "Used" very activelyas a Missile Range and is in fact Un-pop ulated. "No Significant Impact" can truly be realized there. 3

I stand Opposed to the "Proposed MOA"over Southern Colorado.

Colorado does have a Noise Control Law that may apply in this case. 4

James Vann Adams, Jr.
Past President,National Association of Noise Control Officials (NANCO)
Past Chairman,Community industrial Noise Control Association of Colorado (CINCA)

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Jason and Jane Barlow
9026 McConnell
Laughlin AFB, TX 78840-2714
Ph/FAX: (210) 298-2854
Wk Ph: (210) 298-5662
E-mail "lazyjranch@aol.com"

25 May 96

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Ave.
Andrews AFB, MD 20762-5157

Dear Program Manager:

Thank you for the copy of the Draft Environmental Impact Statement (DEIS) on the Colorado Airspace Initiative.

FOR THE RECORD, WE ARE ABSOLUTELY, 100% OPPOSED TO THE AIRBURST AND LA VETA MOA'S AND ALL MTR'S LEADING TO THEM. The DEIS's "day-night (24 hour) averaging" of the sound impact is an unworthy and deceptive measurement of the potential impact this noise disruption will have on our community. It does NOT accurately reflect the potential and inevitable damage to the wildlife, livestock and our way of life. 1,2

My wife and I would NOT have purchased property and be building a home in Westcliffe, on top of a beautiful, quiet, aspen covered hill if we had known we would be directly below the La Veta MOA. The very thought of being subjected to "2.8" sound events "greater than 65db" (subterfuge for something more like 120+dbs) from military jets on a daily basis sickens and distresses us. 3

As a military pilot I've lived near air bases and flown in MOA's and along low-level routes all my career. I know full well the altitudes, airspeeds and hazards associated with this type of flying. I have also been on the ground when these aircraft have gone overhead. The noise is shocking and incredibly loud -- 24 hour averaging of this event is ludicrous to those beneath its sound blast. Who wants to live like that? In addition, the echoing of this noise in the Wet Mountain Valley will be devastating to our life style not to mention our peace and quiet. Frankly, with the downsizing of our USAF, I cannot understand the necessity for additional MOA's or training routes. Please do some thinking "outside the box," and find some other way to get your training, without ruining our communities in the process. 4 5

Sincerely,

Jason and Jane Barlow
Property Owners, Elk Haven, Westcliffe, CO

cc: Gov Roy Romer, Congressman Scott McInnis, Senator Hank Brown, Senator Ben Nighthorse Campbell, Custer County Action Association

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RESPONSES TO COMMENTS

Response to Comment No.1

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

Response to Comment No.2

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

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Response to Comment No.3

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

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Response to Comment No.4

There would be some changes in sortie numbers, noise levels, and airspace dimensions under the Original Proposal and the Preferred Alternative addressed in the EIS. However, overall flying hours of the 140 WG will be reduced from 5005 hours to 4600 hours. When compared to existing military aircraft training in the study area, these changes would not change the current levels of solitude and peace and quiet experienced by residents. As under current conditions, noise from military aircraft operations may periodically disturb citizens and affect their enjoyment of solitude; however, opportunities for abundant periods of total peace and quiet would continue as under present conditions.

Response to Comment No.5

Training for potential military conflict in time of peace is a reality recognized by the Congress and the President. As military forces are cut back, the quality of training for existing forces must be maintained and improved to ensure our nation has an effective military. As the active duty military force is reduced in size, the ANG role and the role of the 140 WG in the total force structure is increasing. Over the past several years, the DOD has conducted studies to evaluate mission readiness and cost effectiveness of its total force. In comparison to DOD regular components, the ANG has relatively low operating costs and provides a cost effective investment.

Custer County "Action Association
PO BOX 552
Westcliffe, CO, 81252

25 May 1996

I was an Air Force dependent for the first 18 years of my life and was an Air Force officer for twenty-four more years. I flew jets for the Air Force for some of those years. I have lived on or near Air Force Bases for most of those years. Jets make noise, lots of it. It really does not matter what the 24 hour average noise level is. What does matter is the noise level when the airplane is over your house. Of course the 24 hour noise average is low...it is only over your house for a microsecond. That argument is similar to saying the destructive power of a tornado is really low when averaged over a 24 hour period. The 24 hour noise level average is a really dumb idea. The only way to have a high DEIS noise level with a limited number of flights is to have a deafening noise level during the "low level" overflights. We will have extreme noise followed by waiting for the next noise attack. That is worse than a constant "elevated" noise level. 1

I just retired from the US Air Force and I am building a home in Westcliffe so I could get away from noise, pollution and crowds. My log cabin will be completed in June 1996. I like Westcliffe because of the serene mountain setting. Low level jet overflights will be extremely noisy for the short period of time they are overhead. Do the low level practice in existing areas approved for low level training, not over our serene mountain valley. 2

Brooks William Booker III, Colonel, USAF Retired
17535 Chipped Arrow Way, Monument, CO 80132

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RESPONSES TO COMMENTS

Response to Comment No.1

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

RESPONSES TO COMMENTS

Response to Comment No.2

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

May 25,1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Ave
Andrews AFB,MD 20762-5157

Re: Environmental impact of proposed military overflights of Custer County, Colorado

Dear Sir:

We own property near Westcliffe, Colorado and are planning to build our permanent residence there within the next year. The quiet of the Wet Mountain valley is the main attraction of the area for us.

We are extremely concerned that proposed changes in the military aviation patterns could destroy the tranquility of the valley and drastically devalue our investment. In particular , we strongly object to the method of averaging sound pressure levels used in the DEIS to determine the acceptability of noise pollution . Sound pressure levels in the range of 100 DBA on the valley floor are unacceptable regardless of duration or frequency. 1,2

It is patently ridiculous to say that as long as the 24 hour average SPL is below 65 DBA, any peak noise is tolerable. Use of this logic would allow one to conclude it's okay to be run over by a 10 ton truck daily since the 24 hour average force loading is below 3 pounds, or that it's acceptable to drive 100 mph in a school zone as long as the 24 hour average is below 20 mph. 3

Please insist that a rational approach to the measurement of noise pollution be used in the decision making process. Thank you for your consideration.

Thomas W and Jean R Brook
5825 Plateau Ct
Ft Collins, Colorado 80526

bc: Custer County Action Association
Email: Elected Officials

499

RESPONSES TO COMMENTS

Response to Comment No.1

There would be some changes in sortie numbers, noise levels, and airspace dimensions under the Original Proposal and the Preferred Alternative addressed in the EIS. However, overall flying hours of the 140 WG will be reduced from 5005 hours to 4600 hours. When compared to existing military aircraft training in the study area, these changes would not change the current levels of solitude and peace and quiet experienced by residents. As under current conditions, noise from military aircraft operations may periodically disturb citizens and affect their enjoyment of solitude; however, opportunities for abundant periods of total peace and quiet would continue as under present conditions.

Response to Comment No.2

In order to address concerns regarding possible devaluation of real estate, the EIS evaluated historical data for property values. This analysis compares counties within the study area for the CAI, including those areas with currently utilized military airspace, to counties outside the study area. The results indicate that all counties experienced increases in property values. Further, in terms of median property values, counties within the study area for the CAI increased 99.71 percent compared to counties outside the study area, which increased 57.74 percent. Whereas a report published by the Federal Aviation Administration concludes "that noise has been shown to decrease the value of property by only a small amount--approximately 1 percent decrease per decibel (DNL)," this analysis applies to airport/airfield environments and not land areas underlying military training airspace. Therefore, although it is not possible to absolutely conclude that counties experiencing military aircraft overflights incur any greater change in real estate values than counties not experiencing similar overflight activity, it is not likely that real estate values would drop as a result of the CAI.

500

RESPONSES TO COMMENTS

Response to Comment No.3

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

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501

KEITH CLIVER
P.O. Box 486
PALMER LAKE, CO.
80133
5-25-96

TO: PROGRAM MANAGER, CAI EIS
ANGRC / CEVP
3500 FETCHET AVENUE
ANDREWS AIR FORCE BASE, MD. 20762-5157

I AM WRITING TO EXPRESS MY OPINIONS & THOUGHTS ON THE EXPANSION OF THE LA VETA MOA. 1

I AM OPPOSED TO ANY EXPANSION OF ANY MOA FOR THE FOLLOWING REASONS.

1) IT MAKES ABSOLUTELY NO SENSE TO SPEND THE TIME, RESOURCES, MONEY TO CREATE THE SANGRE DE CRISTO WILDERNESS AREA — THEN ALLOW MILITARY JETS TO TRAIN OVER/NEAR THE SAME AREA. 2

2) WHY CAN'T THE A.N.G. TRAIN OVER FORT CARSON & PINION CANYON — USE EXISTING AREAS ALREADY DESIGNATED FOR MILITARY OPERATIONS — CONSOLIDATE — SHARE WITH OTHER BRANCHES OF THE ARMED FORCES RATHER THAN RUIN NEW AREAS 3

RESPONSES TO COMMENTS

Response to Comment No.1

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Response to Comment No.2

The Colorado Wilderness Act became public law on August 13, 1993, which designated the Sangre de Cristo Wilderness Proposal the Sangre de Cristo Wilderness Area. Military overflights have been occurring in the overall CAI study area for approximately 25 years. The ANG adheres to its "Policy on Air National Guard Overflights of Designated Wilderness and Wild and Scenic Rivers," as presented in Appendix L. This policy is intended to protect specifically identified areas, such as the Sangre de Cristo and Greenhorn Mountain Wilderness Areas, by limiting training operations to no lower than 2,000 feet above ground level whenever possible unless safety of the flight or operational parameters may be compromised.

3) YOUR INFERENCE THAT A BISON IS NOT AFFECTED BY NOISE/JETS BECAUSE IT STANDS STILL, IS FLAWED. MANY SPECIES "FREEZE" AND REMAIN MOTIONLESS WHEN IN FEAR. — 4

4) I DO NOT SEE THE NEED AT ALL FOR THE AIR NATIONAL GUARD — WHAT DO WE HAVE A U.S. AIR FORCE FOR? WHEN WAS THE LAST TIME THE A.N.G. WAS MOBILIZED TO PROTECT THE U.S.? — 5

5) IN THIS DAY AND AGE — PEOPLE VALUE & NEED PEACE, SOLITUDE, QUIET AND THAT'S ONE REASON THE WET MOUNTAIN VALLEY & SANGRE DE CRISTOS ARE SO SPECIAL - WE DON'T NEED TO RUIN THAT AREA. I JUST WISH FOR ONCE IN THIS COUNTRY, POLITICIANS & THE MILITARY WOULD DO WHAT MAKES SENSE — WHAT'S RIGHT — INSTEAD OF MERELY TRYING TO PROTECT THEIR JOBS. CORPORATIONS & BUSINESSES ARE DOWNSIZING — THE A.N.G & MILITARY NEED TO ALSO. — 6, 7

THANK YOU FOR CONSIDERING MY COMMENTS.

Sincerely -

Keith Cliver

5025

RESPONSES TO COMMENTS

Response to Comment No.3

The use of other training areas was examined as part of the development of the alternatives studied in detail in the EIS in Subsection 2.3. The proposal was designed to minimize conflicts with potentially sensitive areas while providing the training resources necessary to meet military readiness requirements. Specific narrowing criteria for the selection of military training airspace (see Subsection 2.3.3 in Volume I) were used to evaluate other locations, and no alternative training areas were identified that could be substituted for the airspace configuration proposed in the alternatives studied in the EIS.

The primary user of the airspace included in the Colorado Airspace Initiative is the 140 WG based at Buckley Air National Guard Base in Aurora, Colorado. Because of limited resources and aeronautical constraints, virtually all of our nation's fighter units train in airspace that is within a "tank of gas" of the aircrews' base.

Response to Comment No.4

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.5

The Air National Guard (ANG) is a congressionally approved entity that functions as part of a total force with its active duty counterparts. The 140 WG was, in June/July, 1996, put on "active duty" status to support Operation Southern Watch, a United States effort to assist in enforcing the "no-fly" zone in Iraq. Several other ANG units are currently on active duty status supporting similar activities in Iraq, Turkey, Bosnia, Panama, and Columbia.

RESPONSES TO COMMENTS

Response to Comment No.6

There would be some changes in sortie numbers, noise levels, and airspace dimensions under the Original Proposal and the Preferred Alternative addressed in the EIS. However, overall flying hours of the 140 WG will be reduced from 5005 hours to 4600 hours. When compared to existing military aircraft training in the study area, these changes would not change the current levels of solitude and peace and quiet experienced by residents. As under current conditions, noise from military aircraft operations may periodically disturb citizens and affect their enjoyment of solitude; however, opportunities for abundant periods of total peace and quiet would continue as under present conditions.

Response to Comment No.7

Training for potential military conflict in time of peace is a reality recognized by the Congress and the President. As military forces are cut back, the quality of training for existing forces must be maintained and improved to ensure our nation has an effective military. As the active duty military force is reduced in size, the ANG role and the role of the 140 WG in the total force structure is increasing. Over the past several years, the DOD has conducted studies to evaluate mission readiness and cost effectiveness of its total force. In comparison to DOD regular components, the ANG has relatively low operating costs and provides a cost effective investment.

May 25, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Ave.
Andrews AFB, MD 20762-5157

Re: Colorado Airspace Initiative

Dear Program Manager:

504

I would like to take a few minutes of your time to let you know of our displeasure regarding the proposed changes to the Air National Guard Military Operation Area and Training Routes as they pertain to the Wet Mountain Valley area.

We have lived in Colorado since 1983, and have looked forward to the day when we could move into the mountains to escape the rigors of metropolitan life. We found, after much research, the perfect area-the Wet Mountain Valley. Now, our "***find***" may be threatened and we are not pleased. Living in the Denver area, we saw how people complained about the noise of Stapleton Airport, even though they moved near it and knew of the relevant noise it produced. Living in an area with no such noise, allows us the opportunity to prevent this type of change from occurring. 1

We have invested a substantial amount of money into building a peaceful home on Grape Creek, along with our horse barn, so that we can enjoy the wonderful things that the Valley and mountains have to offer us and our guests. We do a substantial amount of horseback riding and also work with young children in honing their horseback riding skills. Needless to say, a sudden pass by a jet could cause a very unwanted situation for us. 2

With all of this in mind, we respectfully request the elimination of Airburst MOA, LaVeta MOA and all MTR's leading to the Airburst Range. 3

Sincerely,

Martha A. Fulton

Robert H. Fulton Martha A. Fulton
1635 Quanah Rd
PO Box 1400
Westcliffe, Colorado 81252
719 783-3204

RESPONSES TO COMMENTS

Response to Comment No.1

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

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Response to Comment No.2

It is possible that aircraft noise could startle domestic animals in close association with humans (e.g., penned animals) and cause injury to humans or the animals. However, animals have been shown through numerous studies to adapt and habituate to various sound sources, including jet aircraft noise. Because the CAI airspaces involved where humans and domestic animals are in close association are also mostly existing airspace that have been utilized for over 25 years, this adaptation and habituation to jet aircraft noise has likely already occurred.

Response to Comment No.3

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

SHIPPED MAY 2 5 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD. 20762-5157

We purchased a small ranch in Custer County, near Westcliff, Colorado, with the thought in mind of retiring there, raising a few horses and enjoying the tranquility of that region.

Now we understand that the Air National Guard is considering this area for thousands of overflights per year. This will have a tragic effect upon the area. We have been exposed in the past tothe horrible noise of commercial jets leaving Kennedy Airport in New York and the Atlanta Airport in Georgia. The noise level of Air Force jets is even worse. 1 2

Therefore, should this proposed plan go into effect we would not move to the area and the value of our land would decrease substantially. 3

We realize this is a selfish approach to the problem but urge you to reconsider the conclusions to be reached and use a different area for your exercises. 4

Sincerely yours

Vincent V. Lindgren

Vincent V. Lindgren

Mildred Lindgren

Copies to: Custer County Action Association

Governor Roy Romer

Senator Hank Brown

Congressman Scott McInnis

Senator Ben Nighthorse Campbell

505

RESPONSES TO COMMENTS

Response to Comment No.1

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

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Response to Comment No.2

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.3

In order to address concerns regarding possible devaluation of real estate, the EIS evaluated historical data for property values. This analysis compares counties within the study area for the CAI, including those areas with currently utilized military airspace, to counties outside the study area. The results indicate that all counties experienced increases in property values. Further, in terms of median property values, counties within the study area for the CAI increased 99.71 percent compared to counties outside the study area, which increased 57.74 percent. Whereas a report published by the Federal Aviation Administration concludes "that noise has been shown to decrease the value of property by only a small amount--approximately 1 percent decrease per decibel (DNL)," this analysis applies to airport/airfield environments and not land areas underlying military training airspace. Therefore, although it is not possible to absolutely conclude that counties experiencing military aircraft overflights incur any greater change in real estate values than counties not experiencing similar overflight activity, it is not likely that real estate values would drop as a result of the CAI.

Response to Comment No.4

The use of other training areas was examined as part of the development of the alternatives studied in detail in the EIS in Subsection 2.3. The proposal was designed to minimize conflicts with potentially sensitive areas while providing the training resources necessary to meet military readiness requirements. Specific narrowing criteria for the selection of military training airspace (see Subsection 2.3.3 in Volume I) were used to evaluate other locations, and no alternative training areas were identified that could be substituted for the airspace configuration proposed in the alternatives studied in the EIS.

The primary user of the airspace included in the Colorado Airspace Initiative is the 140 WG based at Buckley Air National Guard Base in Aurora, Colorado. Because of limited resources and aeronautical constraints, virtually all of our nation's fighter units train in airspace that is within a "tank of gas" of the aircrews' base.

2035 Ogden St.
Denver, CO 80205
May 25, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Ave.
Andrews AFB.MD 20762-5157

re: Comment re Colorado Air National Guard

Dear sir/madam:

I do not agree with the DEIS finding of "no significant impact" of low- altitude training flights over the San Luis and Wet Mountain Valley in south central Colorado. While I live in Denver, I and my family are regular visitors to the public lands in these valleys. If a jet were to suddenly fly over this region, the noise would be overwhelming. I am herewith adding my voice of objection to that of the others who live in the region, and whom you have chosen to ignore, that you must not disturb the peace and quiet of this special region with training flights. 1

The sound of airplanes, particularly low flying jets, should not be heard in state parks, wildlife refuges, and Great Sand Dunes National Monument. I understand that you have based your finding of "no significant impact" on the standard used from urban communities of 65 decibels over a 24 hour average. The impact on wildlife and community peace and quiet cannot be measured against a 24 hour average used to measure the constant noise level in a busy urban setting. Such logic is ludicrous and offends common sense. 2, 3,4

Please eliminate Airburst MOA, LaVeta MOA, VR-413 and all MTRs leading to Airburst Range. I cannot imagine that national (and particularly state) defense has any need of creating such an offensive disturbance in a quiet land. 5

Sincerely,

Honoria Niehaus

Honoria Niehaus, CPA

cc: Colorado Airspace Alliance
Office of the Governor of Colorado

507

171L Honoria Nichaus

RESPONSES TO COMMENTS

Response to Comment No.1

There would be some changes in sortie numbers, noise levels, and airspace dimensions under the Original Proposal and the Preferred Alternative addressed in the EIS. However, overall flying hours of the 140 WG will be reduced from 5005 hours to 4600 hours. When compared to existing military aircraft training in the study area, these changes would not change the current levels of solitude and peace and quiet experienced by residents. As under current conditions, noise from military aircraft operations may periodically disturb citizens and affect their enjoyment of solitude; however, opportunities for abundant periods of total peace and quiet would continue as under present conditions.

Response to Comment No.2

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.3

The approach used in the EIS has been modified. The Federal Interagency Committee on Noise (FICON), representing a variety of Federal agencies with a mix of concerns associated with aircraft noise, reviewed aircraft noise analyses issues in 1992. This committee's report (FICON 1992) continued an approach to evaluating relative impacts associated with aircraft noise that has been recognized by noise analysis experts as the most widely endorsed and comprehensive approach to aircraft noise analysis available. This approach to noise analysis was incorporated into the analyses associated with the Draft EIS. In general, Federal land use compatibility criteria are derivatives of guidelines first devised for land near airports. All land use compatibility is based on the use of Day-Night Average Sound Level (abbreviated as DNL or Ldn) as the descriptor representing community noise environments. The criteria treat areas below DNL 65 dB as compatible for all uses, including residential, and they treat DNL 65 dB as a threshold for significant exposure. There is no generally accepted method for treating rural areas differently for these purposes.

However, many EIS reviewers, including some members of the Federal regulatory community, felt the application of the FICON standards, and the 65 dB threshold, to a rural setting was inappropriate for such areas with more quiet ambient noise conditions. Consequently, the use of the 65 dB threshold as the sole means to assess relative impacts or the acceptability of noise levels associated with aircraft operations addressed in the EIS has been modified and the analysis now includes additional information to evaluate potential impacts.

Response to Comment No.4

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

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Response to Comment No.5

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

Robert R. Perron
8 Bass River Road Beverly, Massachusetts 01915
(508) 922-0209

May 25, 1996

Air National Guard Readiness Center
ANGRC/CEVS
Attn: Harry Knutson
3500 Fetchet Avenue, Mail Stop 18
Andrews AFB, MD 20331-5157

Dear Mr. Knutson:

Subject: Military Aircraft training in the Wet Mountain Valley of Colorado.

My wife, Mary and I are owners of 15acres of land in Cuerno Verde. This property is located in Custer County, Colorado and is about five miles south of Westcliff.

We purchased this property in the mid-1980's because of its exceptional vistas and serenity where one can escape from the noisy and mechanistic world.

The proposed military training and exercises which are being considered in the Wet Mountain Valley and Westcliff areas would certainly and most severly intrude in the environment and tranquility we have sought. 1

We do not believe that any form of mitigation can resolve the serious noise problem which will be generated by your program. 2

Therefore, we firmly oppose the proposed La Veta Military Operations Area and that the Military should find an alternative site which will be distantly removed from a cherished habited area. 3

Sincerely
Robert R. Perron
Robert R. Perron

cc Senator Hank Brown
717 Hart Senate Office Building
Washington, D.C. 20510

U.S. Senator Ben N. Campbell
380 Russell Ofice Building
Washington, D.C. 20510

Governor Roy Romer
6136 State Capitol Building
Denver, CO 80203

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RESPONSES TO COMMENTS

Response to Comment No.1

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Response to Comment No.2

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.3

The use of other training areas was examined as part of the development of the alternatives studied in detail in the EIS in Subsection 2.3. The proposal was designed to minimize conflicts with potentially sensitive areas while providing the training resources necessary to meet military readiness requirements. Specific narrowing criteria for the selection of military training airspace (see Subsection 2.3.3 in Volume I) were used to evaluate other locations, and no alternative training areas were identified that could be substituted for the airspace configuration proposed in the alternatives studied in the EIS.

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Leon C. Tupy
1330 Timberline
Boulder, Colo 80304
303 443-2607

* This letter handwritten as I am writing from Sick Bed

Merrill Lynch Consumer Markets
~~1965 15th Street~~
~~15th and Pearl~~
P.O. Box 7120
Boulder, Colorado 80306-7120
303 938 3900

Merrill Lynch

5-25-96

Dear Mr Program Director
CAIEIS ANGRC/CEVP

Throughout my adult life, I have voted + promoted a strong U.S. Natl Defense. I have a young daughter who is a Captain in the Air Natl Guard in promotion of the LaVeta MOA + The Airburst MOA + all MTR's leading To the Airburst Range in South Central Colo. I have corresponded + spoke with Gov Romer, Sens Brown + Campbell + various US Rep from Colo along with Air Guard Rep extensively. Having studied The proposals + ideas put forth by These parties + upon reading the final DEIS, I am appalled at The lack Of Truth + utter ~~Deceit~~ deceit put forth by the Air Guard with the use of our limited TAX dollars. There Job is to Protect us NOT damage this country. They even fail To ~~ac~~ acknowledge that neither Airburst or LaVeta fail to meet There own basic criteria for MOA's + ignore the fact That the guard has + will continue To accomplish Their Training W/O this additional space.

Some months ago, a Natl Oregon research group found that the Wet mountain Valley in Custer Co, Colo was one of the most pristine, Quiet areas left in these United States. for anyone to let this area be damaged, must in fact be irresponsible, + care Nothing about Colo + in fact These United States. They have Not listened To the citizens of Colo (and all) in the DEIS.

The Methodology used + Relied a Fraud on the readers + TAX payers. Examples include, 1) 24 hour Ave of the Noise Level, currently MAnt of 30 Dbl now in parts of Valley. 2) Jet Planes can produce over 100 Decibles + amplify off mountains. 65 Decible readings are considered but not Natl Airports - How about 130 Dec in a peaceful Valley, with sudden loud noises from multiple planes, some even from Other States. 3) The last 5 Years The Guard has dramatically reduced flights in this region - This must be the basis point of comparison in EIS. If This is allowed To go thru by people who have NO long Term vested interest in The Custer County Region Regarding The affect of wildlife, Cracks from fires, Prop Velocities, quality of Life, Noise, environment + distribution of The revenue Base in this region, all people in No Could + do have an impact on decision should stand up + be counted + hang Their head in Shame.

Sincerely, Leon Tupy

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2
3
4
5,6

511

172L Leon Tupy

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

Even though LaVeta and Airburst Military Operations Areas (MOA) are smaller than the optimum size recommended by the United States Air Force Master Plan, they perform a valuable function in allowing aircraft to accomplish some training events. For example, they are used for ground to air threat avoidance and as airspace to re-group for tactical entry to the Airburst Range.

Response to Comment No.3

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.4

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

Response to Comment No.5

The frequency of training flights that have been observed by the public represent normal operations needed to fulfill USAF training requirements.

Response to Comment No.6

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.



May 26, 1996

Dear Sirs,

After supporting large military budgets for decades Thru the cold war - my husband and I are looking forward to a quiet retirement in the San Luis Valley.

We have a beautiful property which is shattered by the loud noise of your low altitude Training. TAKE IT AWAY! Do it on the moon. 1

Eliminate Airburst MOA, La Veta MOA, VR-413 & all MTR's leading to airburst Range. Is there not a place of peace, quiet and solitude in this country?

TAKE IT AWAY! 2

I Thank you for your attention to this matter.

Sincerely

Janet Kircher
8100 W. 8th Place
Lakewood, Co 80215

P.O. Box 53
Jaroso, Colorado
81138

RESPONSES TO COMMENTS

Response to Comment No.1

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

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Response to Comment No.2

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

5/27/96

Program Manager CAI EIS
Andrews AFB, MD 20762-5157

Regarding military overflights:

While living in the San Luis & Wet Mountain areas, we have been startled repeatedly by extraordinary volumes of noise from the overflights. This is the worst kind of Sound pollution. It must not continue in these otherwise wild & pristine places. 1

A tax paying citizen

Madeline Day & family.

6570 Old Stage Rd

Boulder, Co 80302

515

RESPONSES TO COMMENTS

Response to Comment No. 1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

516

1018 Spotswood Ave #1
Norfolk, VA 23507-1234
May 27, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Ave
Andrews AFB, MD 20762-5157

Dear Sir:

I live in Virginia, work in Atlanta, and own land in Custer County, Colorado.

It has come to my attention that the Military, and in particular the Air National Guard, is still trying to get approval of the Airburst MOA, La Veta MOA, and all MTRs leading to the Airburst Range. There has been a Draft Environmental Impact Statement completed (DEIS). This statement is a Whitewash with regards to the actual impact that it will have on Custer County and the Wet Mountain Valley. 1

I own a large section of land in this area and it is the most peaceful and quiet area I have ever been in. The quietness is so unique that it is indescribable. I was recently deer hunting in the valley and an F-16 came cruising up the valley and it was so annoying that I almost took my 270 and fired a round at it. But I didn't.

I am a retired Air Force Officer, and understand the need for MOAs but not in this area. I get the idea that its a beautiful route to fly over. And easy to navigate because of the Valley's layout. Might I suggest that you move the Airburst MOA, La Veta MOA, and all MTRs leading to the Airburst Range to the Vail area, the Steamboat Springs area, or even over Yellowstone National Park. 2

If you really want to feel the beauty of quiet, please visit the Wet Mountain Valley for a few days and hike and fish. You'll understand the beauty of this area and how wonderful quiet is.

Please eliminate the Airburst MOA, La Veta MOA, and all MTRs leading to the Airburst Range! 3

Sincerely,

Stephan D. Hatfield

RESPONSES TO COMMENTS

Response to Comment No.1

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

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The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

Program Manager,CAIEIS
ANGRC/CEVP
3500 FETCHET AVENUE
Andrews AFB, MD 2o762-5157.

May 27,1996.
235 S.Golfwood Dr. east.
Pueblo West Colorado 81007.
Tel. 719 547 3534.

Gentlemen:
Regarding National Guard over flights of F16 and C130 Cargo maneuvers , over Lake Pueblo. This is our only fresh water supply for Colorado Springs,Camp Carson, Fountain & ETC All towns of the front range.

The flights over Pueblo and Pueblo West, Colorado a community of of more than 125,000 people is very unjust, as the F16's are on their way to thr Wet Mountain area exercises. The noise of the F16's is most irratating to everyones ears and nerves, in particular youngsters,babies & the elderly, just cannot endure this ear drum shattering noise. this noise can cause permanent deafness, in many cases. For example would your military families approve of these terrific noises over their heads????. 1

We must also consider what could happen to our fresh water supply when the C130's cargo planes practice touch and go over Pueblo Airport and lake Pueblo Reservoir, & Fifteen to Twenty times a day, say what you want , the fallout of residue from 4 engines surely bodes no good to our fresh xxxxx water supplyor is it because th city of Pueblo airport is paid for each touch and go. Can you ever imagine one of these C130crashing in the city itself, what a tragic mess this would be. 2

Why not keep all of these in and around DENVER COLORADO, that is where all of the National Guard flight plans originally began , or were there too many complaints from the surrounding area including the Buckley Field military complex and its personal.

Have you folks or the military ever considered the wide open spaces foRthe state of NEVADA that your training will ever require???. Also it is only about one hour or so for an F16 flight time from here to any Nevada site.Your promot reply to the above would be appreciated. 3

With kindest regards and best wishes.

Yours truly

Joseph N Herrmann

517

RESPONSES TO COMMENTS

Response to Comment No.1

The noise impact assessment method used in the EIS is applicable to people of all ages. Individual maximum noise levels will be below those which could cause hearing damage.

Many military families, living on and around airbases, are exposed to noise in excess of those which would occur in the study area.

Response to Comment No.2

Touch-and-go operations conducted by C-130 aircraft at Pueblo Regional Airport are not associated with the Colorado Airspace Initiative, and are outside the scope of this evaluation.

Response to Comment No.3

The use of other training areas was examined as part of the development of the alternatives studied in detail in the EIS in Subsection 2.3. The proposal was designed to minimize conflicts with potentially sensitive areas while providing the training resources necessary to meet military readiness requirements. Specific narrowing criteria for the selection of military training airspace (see Subsection 2.3.3 in Volume I) were used to evaluate other locations, and no alternative training areas were identified that could be substituted for the airspace configuration proposed in the alternatives studied in the EIS.

The primary user of the airspace included in the Colorado Airspace Initiative is the 140 WG based at Buckley Air National Guard Base in Aurora, Colorado. Because of limited resources and aeronautical constraints, virtually all of our nation's fighter units train in airspace that is within a "tank of gas" of the aircrews' base.

176L Joseph N. Herrmann

May 27, 1996

To whom it may concern,

I am writing to comment on the DEIS for the Colorado Airspace Initiative (CAI). I am an "ordinary citizen" living near Gardner, directly under the La Veta MOA. I have been involved in the CAI issue since it first came out. I have been a participant in the Working Group meetings, scoping meetings, citizens' group meetings, and countless hours of discussion and argument with other interested and impacted parties, military and civilian.

I cannot express my disappointment strongly enough. This DEIS comes up with No Significant Impact on all areas of citizen concerns, ignores completely the tidal wave of citizen objections, ignores the results of several studies provided for consideration, and in the process pretty much destroys any confidence I (and many others) may have had in the NEPA process. It is too bad that the DEIS, actually the entire EIS, could not be conducted by a TRULY independent contractor, not an agency so obviously in the pocket of the Guard.

The noise testing methodology was especially absurd. To average out the noise of a jet overflight over a 24-hour period to produce an acceptable decibel level is ridiculous!

Also, Gardner most certainly should have been scheduled for a public meeting this way. It is directly under the MOA. We drove 1½ hours to Alamosa for a meeting - they aren't even in the Region of Impact.

Again, I express extreme disappointment and objection to the entire way the EIS has been conducted so far.

Helen Hill

Helen Hill
Box 176
Gardner, CO 81040 719-746-2383

518

1 2 3

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

RESPONSES TO COMMENTS

Response to Comment No.3

The hearing locations were selected to ensure the inclusion of a wide geographic representation of potentially interested parties within the affected areas to ensure maximum participation. The availability of meeting rooms with the requisite facilities, that could be reserved on the dates required, also was a significant factor in the selection process. Input from the Citizens Working Group and its members was also considered. These factors were considered more significant than selecting a site primarily on the basis that it might be directly under an airspace.

27 May 96

To the Program Manager, CAI EIS:

I am writing to you to voice my opposition to the Colorado Airspace Initiative. As a former military fighter pilot (F-4 and F-16 pilot), I know what noise can be generated from aircraft in MOAs and MTRs. An aircraft traveling at high speed and low level can rattle a window as well as a person's nerves. Also, at higher altitudes, a sonic boom can break windows and literally scare the breath out of a person.

I assume that the MTRs will be positioned around the towns to minimize the noise, but that will not work. I have strayed outside the lines of MTRs on many occasions. Yes, it was unintentional, but I still made enough noise to generate telephone calls from the local residents. Also, I have answered the phone at my squadron several times when called by irate people who had thought they lived in a quiet area. After telling them that it was not our squadron or sorry for the inconvience, I hung up the phone and nothing was ever done to prevent further incidents. As a military member, nobody really cared if we the squadron strayed outside the MTR or created a sonic boom that broke windows. We knew that Uncle Sam occasionally paid for a few broken windows, but accidents do happen. 1

Speaking of accidents-large birds fly in Custer County. They can strike an aircraft and cause an accident. There are numerous other reasons that an aircraft can have an accident-flying too low and hitting a tree, fire, or any number of other emergencies. We have all seen the pictures of military aircraft exploding into a hotel in Indianapolis or in a housing area in Nashville. Military aircraft carry live 20mm ammo as well as a variety of bombs and missiles. Sure, the bombs will normally be training weapons, but they still carry an explosive charge that could kill someone or take off someone's arm. 2 3

As a land-owner and tax-payer, I am asking you to please find another area to put the MOAs and MTRs described in the current Colorado Airspace Initiative.

James A. Lehr

ANDY&NANCY LEHR
989 POST OAK ROAD
KELLER, TX. 76248

520

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

Because of the potential for loss of a pilot's life and the high cost of modern military aircraft, avoidance of collisions with birds is extremely important to the ANG. The potential for a bird-aircraft strike would not change significantly under the proposal. Both the Original Proposal Alternative and the Preferred Alternative consist largely of modifications to existing airspace or establishments of new airspace in the vicinity of existing airspace. These actions would, therefore, encompass the same seasonally adjusted bird avoidance procedures associated with the bird migration corridors as are utilized currently with the existing airspace. Due to the fact that only four bird strikes have occurred in existing airspace associated with the Colorado Airspace Initiative in the past five years, the likelihood of future bird-aircraft strikes under any of the alternatives would be expected to be low.

The USAF has established a Bird/Aircraft Strike Hazard (BASH) Team to implement procedures to prevent and reduce the threat of bird/aircraft strikes, and to investigate and track any bird strikes that occur. In addition, each USAF/ANG base or flying unit is required to establish a BASH program to minimize the risk of bird strikes both at the base airfield and in airspace training routes for the unit. The USAF BASH Team assists each base or flying unit by providing Bird Avoidance Model (BAM) graphs. These graphs estimate the relative bird strike risk for flying along a specific low-level route or operations area. The model is developed on the basis of waterfowl and raptor migration and concentration data. The BAM graph depicts the severity of the bird strike hazard at a particular time of day, month, and segment of a low-level route. This information is used by the flying unit to determine the optimum route schedule and avoidance measures to be taken to prevent bird/aircraft strikes. In addition, the unit publishes Notices to Airmen (NOTAM) to alert transient aircrews to specific bird migration hazards, activity periods, and avoidance procedures.

Response to Comment No.3

A discussion of safety issues, including bird-aircraft strikes, crash potential, and military ordnance (weapons), is included in EIS Sections 3.1.3 and 4.3.1.

May 27, 1996 (FEDERAL EXPRESS)

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

REF: Colorado Airspace Initiative
Draft Environmental Impact Statement

5 years...$1.5 million (taxpayer) dollars...1,000 pages of the most extensive environmental study ever undertaken by the Air National Guard -- and <u>still</u> the DEIS attempts to sweep away our deep, serious concerns as simply more dust under the broom of military indifference!

My specific questions and requests concerning the Colorado Airspace Initiative were filed with the ANGRC/CEVS by Certified letter dated September 22, 1993 -- but these inquiries have either been avoided or were summarily dismissed with hollow generalities. 1

Therefore, I <u>again</u> repeat my concerns - and INSIST that the Air National Guard provide in-depth, honest and timely responses to the following:

a) With documented proof that a number of wild-fires have been caused by low-flying military jets conducting flare manuevers or emitting sparks during low-level lights...

<u>why does the Air National Guard so flagrantly discount the monumental increase of fire risk from low-level flights?</u>

-- <u>or from the accidental release of fuel?</u>

-- <u>or from release of ordnance?</u> 2

b) The Air National Guard's offer to "provide training on aircraft accident response requirements to any emergency response agency in the area...<u>upon request</u> [emphasis added]", blatantly magnifies ANG's unwillingness to acknowledge the potential magnitude of devasation from even <u>one</u> jet crash! 3

Kimberlyn Properties

P. O. Box 460 Rye, Colorado 81069 (719) 489-3392

521

RESPONSES TO COMMENTS

Response to Comment No.1

The NEPA process is providing the ANG with an opportunity to hear exactly what the public feels about its proposal before any decisions are made. Every scoping comment and every comment on the Draft EIS sent to the ANG has been read and incorporated into the administrative record for the proposal. Public comments have provided a better picture of what subjects the public wanted addressed in the document and have enables the ANG to improve the EIS by adding or expanding to discussions in the Final EIS. Examples of added or expanded discussions include human health effects, natural quiet, environmental justice, amongst others.

Response to Comment No.2

Safety issues associated with military aircraft operations, including the use of military ordnance (weapons) and flares, are discussed in detail in EIS Section 3.1.3 and 4.3.1. The use of hazardous materials and fuels associated with military aircraft operations is discussed in detail in EIS Sections 3.1.12 and 4.12.1. The F-16 aircraft and other aircraft associated with the CAI do not emit sparks during normal flight operations.

b) With but a handful of volunteer firefighters and minimal equipment to protect our communities... what comprehensive plan has the Air National Guard developed to quickly and efficiently assist these firefighters, their equipment, water sources ...in their fight to such jet-caused forest or rangeland fires?

-- to evacuate hundreds of school children, quickly and enmass?

-- to evacuate hundreds of residents...our pets... horses...belongings?

-- to protect thousands of grazing cattle? Protect our homes?

c) Exactly what definitive procedure has the Air National Guard established for those of us impacted by the Colorado Airspace Initiative that will provide just compensation for plummeting property values? 4

d) Clearly, one of the most important concerns of we who oppose the Colorado Airspace Initiative is the devastating startle effect resulting from low-flying military aircraft...

yet, the DEIS has used such blatantly flawed criteria upon which to draw their No Significant [noise] Impact... 5

that we in the Impact Region of the CAI must likewise conclude that the entire DEIS is equally flawed in every other area of study and analysis performed by, or on behalf of, the Air National Guard!

e) The Air National Guard's own studies admit that Airburst and LaVeta MOAs are of inadequate size - and that Airburst C is not only problematic but is also "environmentally supersaturated". 6

Why, then, has the Air National Guard consistently refused to explore, in-depth, one of the other viable alternatives proposed by the CAI Working Committee, the Colorado Airspace Alliance and the Custer County Action Association?! 7

RESPONSES TO COMMENTS

Response to Comment No.3

Initial response to an aircraft accident is the responsibility of the civilian authorities nearest the crash site, who would provide emergency services such as fire, police, and medical assistance, as necessary. It is the responsibility of the civilian unit responding to an aircraft accident to determine what response actions they are capable of performing, including the evaluation of proper personnel training and response equipment. If the responding unit is not capable of performing certain response actions, they should request assistance from the nearest civilian unit capable of performing the required response. In the event of an aircraft accident, the nearest USAF installation would be notified by these authorities. In most cases, the nearest USAF installation would have been previously notified by the USAF unit associated with the downed aircraft. Upon notification of the aircraft accident, the commanding officer of the nearest USAF installation dispatches a Disaster Response Force. The Disaster Response Force includes personnel who have been trained to respond to this type of occurrence, and would include disaster preparedness, security police, medical, fire department, legal, munitions, mortuary, and others as required. The Disaster Response Force would assist local response teams in matters of fire suppression, site security, medical treatment and evacuation, accident evaluation and investigation, retrieval of classified materials or equipment, and protective measures, such as munitions disposal and hazardous/toxic materials protective measures. When necessary, the Disaster Response Force would coordinate activities with other regional response forces to ensure all personnel and equipment are obtained for proper mitigation and control of the accident site. It is the ANG policy to provide training, upon request, on aircraft accident emergency response to any recognized emergency response agency.

One would not buy insurance without first knowing what coverage they were buying...

Nor will I buy the Air National Guard's "need" for additional Colorado airspace based on incomplete - inaccurate - inconsistent - and flawed data which are conveniently structured to support the Guard's position!

8

Sincerely,

KIMBERLYN PROPERTIES

Berriene Martin

Berriene Martin, General Partner
P. O. Box 460; Rye, CO 81069

Copies to:

Governor Roy Romer
Custer County Action Association
Congressman Scott McInnis
Senator Hank Brown
President Bill Clinton
Senator Ben Nighthorse Campbell
Federal Aviation Administration
Demver Air Traffic
Audubon Society
High Country News
Open Space Alliance
Colorado Environmental Coalition
Rural Alliance for Military Accountability
Colorado Division of Wildlife
Congresswoman Pat Schroeder
State Representative Gil Romero
Huerfano County Commissioners
Colorado Air National Guard
Secretary of the Air Force
Environmental Protection Agency
Congressman Wayne Allard
Brig. Gen. Mason C. Whitney
Congressman Joel Hefley
Congressman David Skaggs
Sierra Club

Response to Comment No.4

In order to address concerns regarding possible devaluation of real estate, the EIS evaluated historical data for property values. This analysis compares counties within the study area for the CAI, including those areas with currently utilized military airspace, to counties outside the study area. The results indicate that all counties experienced increases in property values. Further, in terms of median property values, counties within the study area for the CAI increased 99.71 percent compared to counties outside the study area, which increased 57.74 percent. Whereas a report published by the Federal Aviation Administration concludes "that noise has been shown to decrease the value of property by only a small amount--approximately 1 percent decrease per decibel (DNL)," this analysis applies to airport/airfield environments and not land areas underlying military training airspace. Therefore, although it is not possible to absolutely conclude that counties experiencing military aircraft overflights incur any greater change in real estate values than counties not experiencing similar overflight activity, it is not likely that real estate values would drop as a result of the CAI.

Response to Comment No.5

An onset rate adjustment of up to 11 dB has been included in the analysis. This adjustment was determined from a series of controlled scientific studies.

Response to Comment No.6

Even though LaVeta and Airburst Military Operations Areas (MOA) are smaller than the optimum size recommended by the United States Air Force Master Plan, they perform a valuable function in allowing aircraft to accomplish some training events. For example, they are used for ground to air threat avoidance and as airspace to re-group for tactical entry to the Airburst Range.

In addition, Airburst C MOA is an added safety feature that allows military aircraft the opportunity to re-enter the Airburst Range while showing the general aviation pilot more definitively on airspace maps that this airspace may have military activity. The airspace is designed to allow the general aviation pilot the opportunity to go through or over the airspace.

Response to Comment No.7

The recommendations from the Working Group, presented in Appendix F, were used to develop the Preferred Alternative. Many of the airspace recommendations included in the Working Group Alternative were incorporated verbatim into the Preferred Alternative and significant portions of the other recommendations also were adopted into the alternative. As such, these recommendations are consequently evaluated in the EIS. The airspace configuration components not adopted were only eliminated after air traffic or environmental conflicts were identified that made their inclusion not feasible. The proposed configuration of military airspace and the route structure were then coordinated with Federal Aviation Administration representatives and is based on its ability to meet existing U.S. Air Force training requirements. The configuration of military airspace for the alternatives considered, including the Preferred Alternative, was derived in part by available unobligated airspace and was designed to avoid airports, instrument approaches, major airways, and known environmentally sensitive areas. The Working Group Alternative has played a very prominent role in the formation of the Preferred Alternative addressed in the EIS.

Response to Comment No.8

The Colorado Airspace Initiative is not an expansion of airspace, but rather a modification. In many cases, this modification actually results in a reduction of airspace and/or number of sorties flown. The need for the Colorado Airspace Initiative is presented in Subsection 1.3 of the EIS.

Robert S. and Virginia G. Powers
4124 Rockingham Way
Plano TX 75093

27My96

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB MD 20762-5157

Ref: Colorado Airspace Initiative -- Draft Environmental Impact Statement

Dear Sirs:

This is to formally object to the false implication in your draft Environmental Impact Statement (EIS) that the extreme noise level associated with your planned Military Operations Areas (MOAs) and Military Training Routes (MTRs) in certain areas in Colorado will have acceptable effects on the local environment. Your analysis, based on the average noise level, is simply irrelevant to the effects of sudden very loud noises, on both natural wildlife and those of us who have invested in living space in those areas. 1

Your averaging process makes about as much logical sense as to say that the effect of a 100 pound bomb going off one foot from a person, averaged over 4.38 years, is equal to the effect of a one-ounce firecracker per day, for that same time period. Wrong! I think I know which I, and even your fallacious statisticians, would make if we had to choose between the 100 pound bomb and the sequence of firecrackers.

Obviously, our point is that multiple short-duration very loud noises do NOT equate to a steady "average" noise level. Your plan, to send numerous high-noise-level flights over the proposed Colorado areas effectively constitutes the "taking" of property and living quality and other expectations that have been paid for by the residents of those areas, as well as the wildlife that lives there. That is totally unacceptable action. 2

Our interest in this matter is not only a matter of principal, but is also because we have recently purchased property in or very near the planned noise areas. We had reasonable expectations, at the time of that purchase, that our living area would be livably quiet -- not just "quiet on average" based on misleading averaging of frequent but short-lived extremely loud noises. We are not "anti-government" as such -- one of us worked for 26 years for the Federal Government, including at the National Bureau of Standards (now NIST) and as Chief Scientist for the Federal Communications Commission. Between us, we hold advanced degrees in anthropology and in physical chemistry -- so we do have qualifications that enable us to recognize misleading statistics and averaging when we see them. 3

Bottom line: You must, in all logical and equity-based fairness, utterly reject the false conclusions based on misleading averaging, and thereby reject the plan to exercise military operations in the proposed areas of Colorado. 4

525

RESPONSES TO COMMENTS

Response to Comment No.1

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

Response to Comment No.2

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Sincerely,

Robert S. Powers

Virginia G. Powers

cc: Custer County Action Association
PO Box 552
Westcliffe CO 81252

Governor Roy Romer
136 State Capital Bldg.
Denver CO 80203-1792

Congressman Scott McInnis
512 Cannon Office Bldg.
Washington DC 20515-0603

Senator Hank Brown
716 Hart Senate Office Bldg.
Washington DC 20510

Senator Ben Nighthorse Campbell
3990 Russell Senate Office Bldg.
Washington DC 20510

FSPEC: CUSTER.E27

526

RESPONSES TO COMMENTS

Response to Comment No.3

There would be some changes in sortie numbers, noise levels, and airspace dimensions under the Original Proposal and the Preferred Alternative addressed in the EIS. However, overall flying hours of the 140 WG will be reduced from 5005 hours to 4600 hours. When compared to existing military aircraft training in the study area, these changes would not change the current levels of solitude and peace and quiet experienced by residents. As under current conditions, noise from military aircraft operations may periodically disturb citizens and affect their enjoyment of solitude; however, opportunities for abundant periods of total peace and quiet would continue as under present conditions.

Response to Comment No.4

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

527

A. Hawthorne Silver
P.O. Box 243
Crestone, CO 81131

May 27, 1996

Air National Guard Readiness Center
Program Manager
CAI EIS ANGRC/CEVP
3500 Fetchet Ave.
Andrews Air Force Base, MD 29762-5157

Dear Program Manager:

I am writing to comment on your DEIS for the proposed Colorado Airspace Initiative. I was unable to attend the public meeting which you held in Alamosa, but hope that you will consider holding another one in Moffat, Colorado which is a location which will be far more impacted by your proposal. I would like more information about the activities of each sortie flying through the Valley, such as refueling in flight etc. I would also like to know to what extent these routes can be used by out-of-state military aircraft. 1,2

Your study's scientific data is outdated and general, i.e. doesn't pertain to the specific conditions of the San Luis Valley. I would like to know that you have followed guidelines of local experts in wildlife and natural resources.We requested and still require legitimate noise impact studies, i.e. cumulative noise effects, not average effects on any given day. 3

Our citizen's working commitee has made the suggestiom that VR-413 be eliminated, replaced by VR 416. 4,5

This valley is a sanctuary for wildlife, especially birds, and for people who have come to find peace and quiet. If a bird hits the intake on one of your jets, according to General Whitney, you will lose your plane and we will lose whatever it falls upon. The fire hazard here is extremely high, and many areas are inaccesible to fire equipment. What would you do about a forest or range fire started by your equipment, or the equipment of one of your tourist airplanes from another state's Air National Guard? 6

We know you value quiet since you scheduled your meeting for a location which would deter the hundreds of citizens who are willing to make noise about your plans. Please don't make us start all over again, repeating concerns that should have been addressed by this DEIS. The taxpayers are going to tire of paying for your paperchase. 7

My work takes me out of the Valley quite a bit. I come back here to relax. The other day my home was buzzed by a low-flying jet. It was very startling. I called the 800 number, but received no reply. Perhaps you didn't get other calls. We have a lot of new residents who are not informed about this as yet, but will join the O.S.A. protest if their peace and quiet is disturbed. 8

Sincerely yours,

A. Hawthorne Silver

RESPONSES TO COMMENTS

Response to Comment No.1

The hearing locations were selected to ensure the inclusion of a wide geographic representation of potentially interested parties within the affected areas to ensure maximum participation. The availability of meeting rooms with the requisite facilities, that could be reserved on the dates required, also was a significant factor in the selection process. Input from the Citizens Working Group and its members was also considered. These factors were considered more significant than selecting a site primarily on the basis that it might be directly under an airspace.

Response to Comment No.2

All known users of the proposed Colorado Airspace Initiative training airspace have been identified in the document (see Appendix N). No additional aircraft will be permitted to use the proposed or existing training airspace without supplemental environmental analysis.

Response to Comment No.3

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.4

The recommendations from the Working Group, presented in Appendix F, were used to develop the Preferred Alternative. Many of the airspace recommendations included in the Working Group Alternative were incorporated verbatim into the Preferred Alternative and significant portions of the other recommendations also were adopted into the alternative. As such, these recommendations are consequently evaluated in the EIS. The airspace configuration components not adopted were only eliminated after air traffic or environmental conflicts were identified that made their inclusion not feasible. The proposed configuration of military airspace and the route structure were then coordinated with Federal Aviation Administration representatives and is based on its ability to meet existing U.S. Air Force training requirements. The configuration of military airspace for the alternatives considered, including the Preferred Alternative, was derived in part by available unobligated airspace and was designed to avoid airports, instrument approaches, major airways, and known environmentally sensitive areas. The Working Group Alternative has played a very prominent role in the formation of the Preferred Alternative addressed in the EIS.

RESPONSES TO COMMENTS

Response to Comment No.5

Military training route VR-413 is an existing airspace currently used for training. Under the Preferred Alternative, its width would be reduced in size to 6 miles. This would significantly reduce the land area under this airspace and would move its eastern boundary away from the Sangre de Cristo Mountains and the Great Sand Dunes National Monument. In addition, its turn point near Mount Blanca would be moved further south. The minimum altitude would be raised from surface to 500 feet above ground level.

Response to Comment No.6

Initial response to an aircraft accident is the responsibility of the civilian authorities nearest the crash site, who would provide emergency services such as fire, police, and medical assistance, as necessary. It is the responsibility of the civilian unit responding to an aircraft accident to determine what response actions they are capable of performing, including the evaluation of proper personnel training and response equipment. If the responding unit is not capable of performing certain response actions, they should request assistance from the nearest civilian unit capable of performing the required response. In the event of an aircraft accident, the nearest USAF installation would be notified by these authorities. In most cases, the nearest USAF installation would have been previously notified by the USAF unit associated with the downed aircraft. Upon notification of the aircraft accident, the commanding officer of the nearest USAF installation dispatches a Disaster Response Force. The Disaster Response Force includes personnel who have been trained to respond to this type of occurrence, and would include disaster preparedness, security police, medical, fire department, legal, munitions, mortuary, and others as required. The Disaster Response Force would assist local response teams in matters of fire suppression, site security, medical treatment and evacuation, accident evaluation and investigation, retrieval of classified materials or equipment, and protective measures, such as munitions disposal and hazardous/toxic materials protective measures. When necessary, the Disaster Response Force would coordinate activities with other regional response forces to ensure all personnel and equipment are obtained for proper mitigation and control of the accident site. It is the ANG policy to provide training, upon request, on aircraft accident emergency response to any recognized emergency response agency.

Response to Comment No.7

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.8

Since its inception, the toll-free number (800) 582-8507 has helped the ANG to monitor and reduce the number of aircraft noise complaints. All calls to the number are taken seriously regardless of how the caller characterizes the complaint. If callers are not satisfied with the 800-number service, experience future problems with the toll-free number, or feel they are not getting a timely response, an alternative is to call the 140 WG Commander at (303) 340-9555.

LUDVIK Z. SVOBODA • 4766 S. HELENA WAY • AURORA, COLORADO 80015
(303) 680-7118

27 May 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

Dear Sir/Madam:

I am writing to express my strong support FOR the Colorado Airspace Initiative Draft Environmental Impact Statement (DEIS).

I do not feel that the possible adverse impacts are sufficient to justify shutting down this vital training for our armed forces.

I am a member of many, many environmental and wildlife groups. But I also realize that there is a price that has to be paid for our freedom and way of life. I do not feel that the Colorado Airspace Initiative is too high a price.

Sincerely,

Ludvik Z. Svoboda

Ludvik Z. Svoboda

530 1

RESPONSES TO COMMENTS

Response to Comment No. 1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

531

05-28-96

FAY & MARVIN R. COMER JR.
PO BOX 424
CLINTWOOD, VA 24228

WE HAVE PURCHASED PROPERTY IN CUENO VERDE SECTION OF WESTCLIFFE, CO. AND ARE CURRENTLY HAVING A HOME BUILT THERE. THIS WILL BE A LIFETIME DREAM FOR US AS WE ARE LOOKING FORWARD TO THE QUIET, PEACEFUL SURROUNDINGS OF THE MOUNTAIN WHICH WE WILL BE LIVING ON.

WE ARE EXTREMELY OPPOSED TO THE JETS FLYING OVER THIS NOW QUIET AREA AND DISRUPTING WHY WE ARE MOVING THERE. THERE ARE SOME PLACES ON THIS EARTH WHICH SHOULD BE LEFT AS GOD WANTS THEM TO BE AND NOT RUINED BY CONSTANT NOISE CAUSED BY THESE JETS FLYING OVER OUR NOW PEACEFUL LAND. 1,2

WE URGE THE ELIMINATION OF AIR MOA, LA VETA MOA & ALL MTRS. 3

SINCERELY,

FAY COMER

RESPONSES TO COMMENTS

Response to Comment No.1

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Response to Comment No.2

There would be some changes in sortie numbers, noise levels, and airspace dimensions under the Original Proposal and the Preferred Alternative addressed in the EIS. However, overall flying hours of the 140 WG will be reduced from 5005 hours to 4600 hours. When compared to existing military aircraft training in the study area, these changes would not change the current levels of solitude and peace and quiet experienced by residents. As under current conditions, noise from military aircraft operations may periodically disturb citizens and affect their enjoyment of solitude; however, opportunities for abundant periods of total peace and quiet would continue as under present conditions.

Response to Comment No.3

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

Program Manager CAI EIS May 28, 1996
ANGRC/CEVP
3500 Fletcher Avenue
Andrews AFB, MD 20762-5157

Dear Sirs:

I wish to lodge my complaint against the Air National Guard's airspace plan. The arguments for its implementation are not valid in the first place. 1

Low altitude flying is a threat to the environment, livestock, wildlife, and a violation of private property rights. Why should the Colorado Guard be exempt from the same rules governing these violations as the private sector? I urge you to re-examine this plan. I am strongly opposed to it. 2

Maxine Farber
60 Columbine (Cuchara)
Box 329, La Veta, CO 81055

532

RESPONSES TO COMMENTS

Response to Comment No.1

The Colorado Airspace Initiative is not an expansion of airspace, but rather a modification. In many cases, this modification actually results in a reduction of airspace and/or number of sorties flown. The need for the Colorado Airspace Initiative is presented in Subsection 1.3 of the EIS.

Response to Comment No.2

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

533

May 28, 1996

Program Manager, CAJ EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews, AFB, MD 20762-5157

Dear Program Manager:

We are part-time residents of the Wet Mountain Valley and future full-time residents. We have spent uncounted wonderful hours biking, hiking, and jeeping in this very special area. We are writing to express our concerns about the La Veta MOA proposed by the Colorado Air National Guard.

Several years ago we were hiking on the Rainbow Trail in the Sangre de Cristo mountain range and were buzzed by one of these low flying planes. The noise was deafening and we thought the plane was going to crash. All of the people in our group dove behind a downed log. The two children with us were terrified. 1

We do not think that this additional training area is necessary and that, if implemented, it will be a detriment to the people and the environment of the Wet Mountain Valley. The Air Force proved in the Gulf War that they have had adequate training and asking for an expansion area seems unwarranted at this time. 2

Sincerely,

Tonya W. Favinger and

Richard D. Favinger

cc: Custer County Action Association

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

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5/28/96

I am opposed to your plan to fly training missions at low altitude in the Wolcottney area. 1

I believe that the impact to humans and wildlife has not been adequately addressed! Domestic animals will also be adversely affected. 2,3

Please register my opposition to this plan as it now stands. 4,5

Susan R. Hifford

534 Address:
321 Maple Street
Aguilar, CO 81020

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

An additional discussion of human health effects has been added to Volume I of the EIS and can be found in new Subsection 4.13. This new subsection provides more information than previously given in the Draft EIS in Appendix G of Volume II.

Response to Comment No.3

Studies conducted on wildlife have shown that numerous wildlife species have the ability to adapt to the presence of man and various man-made sound sources, including jet aircraft noise. While the noise generated from low-altitude military overflights may be initially startling, habituation to jet aircraft noise occurs with most wildlife species. Species-specific responses to low-altitude overflights vary considerably, and responses from individual animals may have the potential to cause injury. However, wildlife populations are usually affected only when a variety of factors work in combination to impact them, including declines or fluctuations in the availability of a food source, habitat destruction or alteration, predation, hunting, trapping, poaching, disease, or inclement weather, rather than noise alone. Normally, it would be unrealistic to predict or attribute any wildlife population declines to a single stressor, such as noise. In addition, no published scientific evidence was identified that indicated harm may occur to wildlife as a result of exposure to the levels of noise generated by military aircraft that would utilize the airspace associated with the Colorado Airspace Initiative.

Response to Comment No.4

It is possible that aircraft noise could startle domestic animals, especially young or penned animals, and cause them to injure themselves. However, animals adapt and habituate to various sound sources, including jet aircraft noise. Because the airspaces associated with the CAI are mostly existing airspace that have been utilized for over 25 years, this adaptation and habituation to jet aircraft noise has likely already occurred.

Response to Comment No.5

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Kimberlyn Equine Division

P. O. Box 460 Rye, Colorado 81069 (719) 489-3392

FEDERAL EXPRESS

May 28, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

RE: Colorado Airspace Initiative
Draft Environmental Impact Statement

Like the tobacco industry-funded study that could find no association between cigarette smoking and lung cancer

...we find alarming parallels in this third military-funded study relating to the Air National Guard takeover of additional Colorado airspace...conclusions which are, once again, postured to favor the Air National Guard!

Not only does the DEIS fail to address our objections to the potentially devastating effects that low-altitude military flyovers will have on our quality of life...our homes...our businesses... 1

...but these deep-felt concerns have barely been acknowledged. You have not listened. And you have not heard. 2

One more time, I ask...insist...on factual, honest, forthright and unbiased answers to the following questions:

(1) WHY DOES THE AIR NATIONAL GUARD REALLY NEED ADDITIONAL COLORADO AIRSPACE?

ANG feins airspace loss of 40% due to new Denver Int'l Airport...yet the DEIS acknowledges there is only a 10% impact for the Guard due to the new Denver Airport. 3

We are told by the ANG that their F-16's need more and lower airspace...yet there is no written study to show that F-16's require any more airspace than the A-7's.

The ANG resorts to generalities of F-16 modernization ...yet, the 140th fighter wing is maintaining top readiness using F-16's without additional airspace. 4

535

RESPONSES TO COMMENTS

Response to Comment No.1

Many citizens have expressed concern that their quality of life, which is based directly on the kind of lifestyle that they can enjoy while residing in or visiting the State of Colorado, will be changed by implementation of the CAI. The U.S. Air Force, including the ANG, has been conducting military aircraft operations in the Wet Mountain Valley and the San Luis Valley areas where people are most concerned for approximately 25 years. Most of the military airspace proposed under any of the alternatives is currently in use. Commercial aircraft overflights have also been taking place and will continue to do so. Citizens may notice changes in military aircraft overflights in certain areas associated with the CAI. The number of sorties are proposed to increase moderately in portions of the study area and decrease in others. Overall sorties will be reduced from 5,441 to 4,909 under the Preferred Alternative. The bottom altitudes of several airspaces where citizens are most concerned have been raised to reduce noise levels. Therefore, existing quality of life should not be changed.

Response to Comment No.2

The ANG cares about the people that live near their training areas and how they feel about the activity associated with training. The NEPA process is providing the ANG with an opportunity to hear exactly what the public feels about its proposal before any decisions are made. Every scoping comment and every comment on the Draft EIS sent to the ANG has been read and incorporated into the administrative record for the proposal. Public comments have provided a better picture of what subjects the public wanted addressed in the document and have enabled the ANG to improve the EIS by adding or expanding to discussions in the Final EIS. Examples of added or expanded discussions include human health effects, natural quiet, environmental justice, amongst others.

Response to Comment No.3

The opening of the Denver International Airport resulted in the loss of approximately 40 percent of the New Raymer MOA and air traffic control assigned airspace. The impact on the existing Kit Carson MOA, combined with changes proposed under the CAI Preferred Alternative, would result in an overall decrease in the total military training airspace available.

(2) WHY WAS SO LITTLE ATTENTION AND EVALUATION GIVEN TO EXPLORING OTHER VIABLE ALTERNATIVES?

The Air National Guard has found fault with each of the existing viable MOA alternatives - and gave no consideration to joint use of the Army's under-utilized Pinon Canon training area -

yet the ANG insists on retaining the LaVeta and Airburst MOAs, which are defined by their own criteria as being too small to be adequate . -5

(3) WHERE IS THE IN-DEPTH, IMPARTIAL, UNBIASED, UP-TO-DATE, COMPREHENSIVE ENVIRONMENTAL IMPACT STUDY THAT WE WERE PROMISED BY THE AIR NATIONAL GUARD?

Scrutiny of the DEIS exposes countless attempts by the ANG to camouflage as "subjective" the strength of growing opposition to flyovers and their negative impact om wildlife...serenity...outdoor recreation - some of our most poignant concerns! -6

(4) WHY HAS THE NEGATIVE NOISE IMPACT OF LOW-LEVEL FLYOVERS BEEN GIVEN A BACK SEAT IN THE BUS OF AIR GUARD EVALTION, WHEN IT IS UNDOUBTEDLY OUR SINGLE MOST SIGNIFICANT AND IMPORTANT CONCERN?!

The ANG apparently views the intelligence of each of us in the impact area to be little higher than the cattle that graze our ranches...since we are expected to swallow the preposterous methodology and fallacious conclusions of Day/Night Averaging. -7

This deceitful...callous mistreatment of public trust - and flagrant breach of honorable military guardianship - should, of itself, be viewed by the FAA, Department of Defense and Secretary of the Air Force to be of such appalling proportions as to negate the entire DEIS! -8

(5) WHY HAVE THE ISSUES OF SAFETY BEEN BRUSHED OFF WITH A SIMPLE OFFER TO PROVIDE AIRCRAFT EMERGENCY RESPONSE TRAINING...WHEN REQUESTED?

In an Associated Press release from Washington dated May 20, 1996, the AP highlights the continuing dangers of military aviation, citing that -9

"A Navy pilot taking off in an F-14 is 24 times more likely to have a serious or fatal accident than a commercial pilot..."

RESPONSES TO COMMENTS

Response to Comment No.4

The A-7 aircraft had a very small requirement for air-to-air training, normally accomplished in a MOA. It also did not have the radar capability of the F-16 that requires a further distance between aircraft to avoid detection when practicing air intercept or defense evasion maneuvers.

The F-16 training missions currently flown by the 140 WG in Colorado are compromised by the lack of adequate high-altitude airspace to fully accomplish required AMRAAM training.

Response to Comment No.5

The use of other training areas was examined as part of the development of the alternatives studied in detail in the EIS in Subsection 2.3. The proposal was designed to minimize conflicts with potentially sensitive areas while providing the training resources necessary to meet military readiness requirements. Specific narrowing criteria for the selection of military training airspace (see Subsection 2.3.3 in Volume I) were used to evaluate other locations, and no alternative training areas were identified that could be substituted for the airspace configuration proposed in the alternatives studied in the EIS.

The primary user of the airspace included in the Colorado Airspace Initiative is the 140 WG based at Buckley Air National Guard Base in Aurora, Colorado. Because of limited resources and aeronautical constraints, virtually all of our nation's fighter units train in airspace that is within a "tank of gas" of the aircrews' base.

Response to Comment No.6

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

"A pilot of any U. S. military aircraft would be 10 times as liable as a civilian counterpart to have a serious or fatal crash."

"But all is not well in military aviation...so far this year:

> "The Marine Corps...ordered a two-day halt to non-essential flights in March after 10 Marine planes and helicopters crashed in the first three months of the year."

> "The Navy, which ordered a similar 'stand-down' of its West Coast squadrons in February, is concerned that some pilots may be ejecting too late..."

> "An embarrassed Air Force official admitted after the crash of Commerce boss Ron Brown's plane that the aircraft...was using an outdated autopilot system."

> "From 1984 through 1994, 42 U. S. commercial jets have been destroyed in crashes. In that same period 1,523 [emphasis added] military aircraft have been destroyed at a loss to taxpayers of $21.2 billion [emphasis added]. The commercial crashes claimed the lives of 125 crew members while the military crashes claimed 1,633 service members, according to statistics gathered by the General Accounting Office and the National Transportation Safety Board."

The inevitability of a crash heightens our anxiety about the extreme risk of fire. It has been documented in the past few years that at least three forest fires in the Buenos Aires National Wildlife Refuge (New Mexico) alone were started by low-flying military jets. It takes just a spark - or a flare discharged at low altitude - to destroy a forest...wildlife...human life...homes... farms...ranches...cattle...horses...pets...businesses... entire towns! - 10

It is, therefore, a non-negotiable stipulation that the Air National Guard provide, in the final EIS, their specific...comprehensive...realistic and viable plans for providing adequate and timely assistance to area firefighters in the event of a jet crash or jet-caused fire - including, but not limited to, ANG equipment and personnel skilled in firefighting, medical treatment and air/ground evacuation, if and when necessary. - 11

537

RESPONSES TO COMMENTS

Response to Comment No.7

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

Response to Comment No.8

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.9

Detailed information on safety issues and the potential for mishaps for each individual airspace were presented in Subsection 4.3 of the Draft EIS.

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Response to Comment No.10

The fire potential associated with aircraft overflights is generated from the potential for an aircraft crash or the use of flares in training. The EIS evaluated the potential for an aircraft crash resulting from the proposal. This evaluation determined that the likelihood of an aircraft crash would be very low. Therefore, the potential for a fire resulting from an aircraft crash would also be very low. In fact, military accidents have declined in the past decade, as described in the February 1996 report of the General Accounting Office, an organization under the U.S. Congress.

Authorized users of the airspace have proposed the continued use of flares in their training. However, the flares would not be released below 2,000 feet AGL. Once a flare is released, it ignites immediately. The burn time for a flare is approximately 4.0 to 4.5 seconds. In those 4.0 to 4.5 seconds, the flare falls approximately 500 feet. This leaves a safety margin of approximately 1,500 feet to allow for a flare that burns for more than 4.5 seconds to extinguish itself. The 140 WG has no knowledge of any fires being caused by flares released during current training missions by any aircraft utilizing Colorado Airspace Initiative airspace.

RESPONSES TO COMMENTS

Response to Comment No.11

Initial response to an aircraft accident is the responsibility of the civilian authorities nearest the crash site, who would provide emergency services such as fire, police, and medical assistance, as necessary. It is the responsibility of the civilian unit responding to an aircraft accident to determine what response actions they are capable of performing, including the evaluation of proper personnel training and response equipment. If the responding unit is not capable of performing certain response actions, they should request assistance from the nearest civilian unit capable of performing the required response. In the event of an aircraft accident, the nearest USAF installation would be notified by these authorities. In most cases, the nearest USAF installation would have been previously notified by the USAF unit associated with the downed aircraft. Upon notification of the aircraft accident, the commanding officer of the nearest USAF installation dispatches a Disaster Response Force. The Disaster Response Force includes personnel who have been trained to respond to this type of occurrence, and would include disaster preparedness, security police, medical, fire department, legal, munitions, mortuary, and others as required. The Disaster Response Force would assist local response teams in matters of fire suppression, site security, medical treatment and evacuation, accident evaluation and investigation, retrieval of classified materials or equipment, and protective measures, such as munitions disposal and hazardous/toxic materials protective measures. When necessary, the Disaster Response Force would coordinate activities with other regional response forces to ensure all personnel and equipment are obtained for proper mitigation and control of the accident site. It is the ANG policy to provide training, upon request, on aircraft accident emergency response to any recognized emergency response agency.

(6) WHY HAS THE AIR NATIONAL GUARD TREATED SO CARELESSLY THE CONCERNS OF WILDLIFE AGENCIES AND OTHER INFORMED ORGANIZATIONS AS SPECIFICALLY ADDRESSED IN THE LETTERS, STUDIES AND DOCUMENTATION SUBMITTED BY THESE EXPERTS?

Once again...we are blanketed with generalities about "ongoing discussions". And we are cited non-specific studies favorable to the ANG's No Significant Impact finding. It is mandatory that the Air National Guard address these individual issues specifically... comprehensively...without bias. — 12

(7) WHY HASN'T THE AIR NATIONAL GUARD EXPLORED IN DEPTH THE SERIOUS AND DAMAGING EFFECTS THAT LOW-LEVEL FLYOVERS HAVE ON DOMESTIC ANIMALS?

There has been abundant testimony...studies... evaluations...video recordings...by ranchers, farmers, clinical experts...allegedly even the Air National Guard's own records for routine payment of damages to farmers and ranchers whose livestock experience the injurous - even fatal - effects of sudden noise from low-flying military aircraft. — 13

We insist on proper, comprehensive and unbiased evaluation of each of these issues raised.

And, please...leave the bull where it belongs!

(8) IT IS IMPERATIVE THAT THE AIR NATIONAL GUARD SPECIFICALLY ADDRESS THE ISSUES AND DATA SUBMITTED CONCERNING THE PEOPLE AND COMPLAINTS VOICED ABOUT FLYOVERS IN THE WET MOUNTAIN AND SAN LUIS VALLEYS...INCLUDING, BUT NOT LIMITED TO:

a) THE SPIRITUAL RETREAT CENTERS THAT WILL BE IMPACTED — 14

b) THE NEGATIVE EFFECT ON AREA TOURISM

c) THE NEGATIVE EFFECT ON REAL ESTATE VALUES

d) THE SERIOUS, DETRIMENTAL ECONOMIC IMPACT TO THE REGIONS SUBJECTED TO MILITARY OVERFLIGHTS — 15,16

While there is an acknowledged place and space for military preparedness...there is an equally important, imperative need for stringent military accountability.

RESPONSES TO COMMENTS

Response to Comment No.12

Studies conducted on wildlife have shown that numerous wildlife species have the ability to adapt to the presence of man and various man-made sound sources, including jet aircraft noise. While the noise generated from low-altitude military overflights may be initially startling, habituation to jet aircraft noise occurs with most wildlife species. Species-specific responses to low-altitude overflights vary considerably, and responses from individual animals may have the potential to cause injury. However, wildlife populations are usually affected only when a variety of factors work in combination to impact them, including declines or fluctuations in the availability of a food source, habitat destruction or alteration, predation, hunting, trapping, poaching, disease, or inclement weather, rather than noise alone. Normally, it would be unrealistic to predict or attribute any wildlife population declines to a single stressor, such as noise. In addition, no published scientific evidence was identified that indicated harm may occur to wildlife as a result of exposure to the levels of noise generated by military aircraft that would utilize the airspace associated with the Colorado Airspace Initiative.

Response to Comment No.13

It is possible that aircraft noise could startle domestic animals, especially young animals, and cause them to injure themselves. However, animals adapt and habituate to various sound sources, including jet aircraft noise. Because the airspaces associated with the CAI are mostly existing airspace that have been utilized for over 25 years, this adaptation and habituation to jet aircraft noise has likely already occurred.

In addition, the effects of jet aircraft on domestic animals are presented in Subsection 4.6.1.3.3 in Volume I of the EIS.

The AF records and personal communication with the JAG at Peterson AFB indicate that very few (less than 5) claims have been submitted over the last three years for personal property (including livestock) damages due to the effects of noise associated with military aircraft.

We who have become pawns of military chess games across the country can no longer remain motionless on the gameboard of Defense expansion. We expect - and will accept no less - than complete...honest...comprehensive...forthright...unbiased accountability on each and every issue that we have raised.

Until such time...I remain totally committed to the opposition of any additional Colorado airspace takeover by the Air National Guard - or any other military or government branch, department or agency. 17

Enough...is...enough!

Sincerely,

KIMBERLYN EQUINE DIVISION

Barbara J. Higdon
General Partner

P. O. Box 460
Rye, CO 81069

Copies: President Bill Clinton Congressman Scott McInnis

Governor Roy Romer Secretary of the Air Force

Senator Hank Brown Senator Ben Nighthorse Campbell

Federal Aviation Administration Denver Air Traffic Control

Rural Alliance for Military Accountability Audubon Society

Custer County Action Association National Airspace Coalition

State Representative Congresswoman Pat Schroeder
Gil Romero

Colorado Air National Guard Open Space Alliance

Colorado Environmental Coalition Congressman Wayne Allard

Huerfano County Commissioners Congressman David Skaggs

Congressman Joel Hefley Brig. General Mason C. Whitney

Sierra Club High Country News Division of Wildlife

541

RESPONSES TO COMMENTS

Response to Comment No.14

The EIS has evaluated cultural resources, such as historic or Native American sites, by consulting with the appropriate state representatives and local experts to obtain an understanding of the resources present in the study area and to determine whether any possible impacts exist. Some religious and/or meditation centers are under existing airspace. Consequently, the elimination of VR-412 and the changes to VR-413 under the Preferred Alternative, which raises the minimum altitude from surface level to 500 feet above ground level and reduces the route width from 12 miles to 6 miles, should be beneficial to such locations.

Response to Comment No.15

The role of tourism in the local economy, and its impact from the alternatives associated with the CAI, have been studied in the EIS as a part of the evaluation of socioeconomic impacts. There are a number of factors, other than aircraft operations, that may affect tourism and the use of recreational areas, including weather, the proximity of other attractions in the area, and the economy. While it is possible that a tourist visiting an area may find an aircraft overflight to be annoying, no significant change to the tourist industry would be expected considering the fact that the majority of the CAI airspace has existed for many years and the relevant influences from military aircraft operations are not changing in the study area. The contribution of tourism earnings to total industry earnings was presented in the EIS for each airspace. In all instances, these values were very consistent with overall state levels of tourism earnings as compared to industry earnings.

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Response to Comment No.16

In order to address concerns regarding possible devaluation of real estate, the EIS evaluated historical data for property values. This analysis compares counties within the study area for the CAI, including those areas with currently utilized military airspace, to counties outside the study area. The results indicate that all counties experienced increases in property values. Further, in terms of median property values, counties within the study area for the CAI increased 99.71 percent compared to counties outside the study area, which increased 57.74 percent. Whereas a report published by the Federal Aviation Administration concludes "that noise has been shown to decrease the value of property by only a small amount--approximately 1 percent decrease per decibel (DNL)," this analysis applies to airport/airfield environments and not land areas underlying military training airspace. Therefore, although it is not possible to absolutely conclude that counties experiencing military aircraft overflights incur any greater change in real estate values than counties not experiencing similar overflight activity, it is not likely that real estate values would drop as a result of the CAI.

Response to Comment No.17

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

May 28, 1996

David Karas
2121 S. Oneida Street, Suite 434
Denver, CO 80224

Program Manager, CAI, EIS
Environmental Division
Air National Guard Readiness Center/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

Dear Program Manager:

After attending the public hearing which was held at Rangeview High School in Aurora, Colorado on May 22, 1996, and learning for the first time the details of your proposal, I feel compelled to respond. Please enter my letter into the record.

For the past several years, I have been a frequent visitor to the Crestone area. My interest is as a supporter of the religious sanctuaries located there. From what I heard and saw at the hearing, it seems clear that following through with your plan would seriously impact one of Crestone's most precious assets and critically alter the reason why these sanctuaries chose to build there; peace and quiet. 1

Many of the Crestone sanctuaries have been in place for nearly 20 years. Many more are planned or currently under development. Supporters have spent hundreds of thousands of dollars and countless hours building, maintaining and planning these special places dedicated to the specific purpose of retreat and reflection, silent prayer and meditation. I know our society in general has very little appreciation or regard for such pursuits, but for those who are so inclined, it has been wonderful to discover a place where such practices are not merely tolerated but supported, encouraged and nourished. Thanks to the local culture that has grown up around these sanctuaries, the Manitou Foundation, and retreatants from all over the USA, these unique places of worship have managed to stay open. 2

Your plan poses a serious threat to their livelihood as many rely upon revenue from retreatants for their survival. In the literature sent to people wanting to attend a retreat, will they have to disclose: "Crestone; a quiet, remote, undisturbed area, *except for the military jets that periodically fly through the valley like bats out of hell.*" I think you would agree there will be a very significant impact to the religious institutions located in Crestone should you proceed with your plan as drafted. Even reducing the number of flights or having them fly higher will not eliminate the change in how people perceive 3

RESPONSES TO COMMENTS

Response to Comment No.1

There would be some changes in sortie numbers, noise levels, and airspace dimensions under the Original Proposal and the Preferred Alternative addressed in the EIS. However, overall flying hours of the 140 WG will be reduced from 5005 hours to 4600 hours. When compared to existing military aircraft training in the study area, these changes would not change the current levels of solitude and peace and quiet experienced by residents. As under current conditions, noise from military aircraft operations may periodically disturb citizens and affect their enjoyment of solitude; however, opportunities for abundant periods of total peace and quiet would continue as under present conditions.

Response to Comment No.2

Military aircraft operations and religious sanctuaries have co-existed for approximately 25 years in the Crestone area. The EIS has evaluated cultural resources, such as historic or native American sites, by consulting with the appropriate state representatives and local experts to obtain an understanding of the resources present in the study area and to determine whether any possible impacts exist. Religious and/or mediation centers, especially those in the San Luis Valley area, are under existing airspace. Consequently, changes to VR-413 under the Preferred Alternative, which raises the minimum altitude from surface level to 500 feet above ground level and reduces the route width from 12 miles to 6 miles, should be beneficial to such locations.

what Crestone has come to represent. Once those flights start, people will see the San Luis Valley as a newly annexed military zone. Such a notion would be disharmonious with people's perceptions of what a spiritual place is supposed to be. Since the general perception is what is critical, the specifics about flight frequencies and ceilings are mostly irrelevant. Any initiation of military flights through the San Luis Valley will thus effect devastating damage to our highly valued and regarded religious and spiritual centers.

Please don't pierce the silence that is so dearly cherished by those who worship and find solace in Crestone's many sanctuaries. They chose to locate here because it was known as an environment conducive to spiritual practice; i.e, quiet. Please don't disturb that environment now or in the future and destroy what so many have worked so hard to establish. Please show your respect for our need to practice our religious freedom in silence by finding some alternative to your current plan. 4

Thank you for your consideration.

Sincerely,

David Karas

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RESPONSES TO COMMENTS

Response to Comment No.3

Because of the many avenues through which the public has received information on the CAI, including both factual and nonfactual information from various sources, some confusion may exist about the existing airspace and proposed new airspace, particularly for the Wet Mountain Valley and the San Luis Valley. The La Veta MOA is an existing airspace. No changes are proposed for this airspace.

VR-413 is also an existing airspace; however, under the Preferred Alternative, its width would be reduced in size and its eastern boundary moved away from the Sangre de Cristo Mountains. The minimum altitude would be raised from surface level to 500 feet above ground level. VR-412, which is currently a low-altitude route through the Wet Mountain Valley, would be eliminated altogether under the Preferred Alternative, thus eliminating low-altitude training completely from the Wet Mountain Valley. Sorties over the Wet Mountain Valley also are reduced under the Preferred Alternative.

Response to Comment No.4

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

SHIPPED MAY 2 8 1996

Written Comment Form

ENVIRONMENTAL IMPACT STATEMENT FOR THE COLORADO AIRSPACE INITIATIVE

If you would prefer to submit written comments on the DEIS, please use this form. Continue on the back of the form or attach extra sheets, as necessary. Thank you.

NAME: Erik Kaye

TITLE/ORGANIZATION: Cloud Base Flying

ADDRESS: Pobox 1785 (Street) Crested Butte (City/State/Zip) co. 81224

– COMMENTS –

I have been flying this valley and region for 15 years. To see it fall to the hands of my own people is a shame. We are not at war and need no more space for military manuvers. This valey is peacfull and ~~quiet~~ is for ~~Hang Gliding~~ not for abuse by the Military. I say NO to any flying by a bunch of ~~ego~~ Maniacs. 1

PS. The wildlife will be also abused by this action. 2

Please hand this form to the staff, drop into the collection box, or mail to:

Program Manager, CAI EIS
Environmental Division
Air National Guard Readiness Center/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

545

RESPONSES TO COMMENTS

Response to Comment No.1

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Response to Comment No.2

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

189L Eric Kaye

546

Douglas Larsen and Martha Shoman
P.O. Box 2175
Boulder, CO 80306

May 28, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5-57

Dear Program Manager:

We are writing to express our disapproval of the proposed expansion of the Airburst and LaVeta MOAs in Southern Colorado. As property owners in the San Luis Valley, we are quite concerned about the environmental impact of low flying F-16s as they practice combat manuvers. The Draft Environmental Impact Statement released by the Air National Guard fails to adequately address environmental and other issues. For example it fails to account for the effect of multiple jets in an area or the amplifying effect of valley walls and mountains. And its claim that some 5000 sorties, low altitude combat training, toxic emissions, and decibel levels exceeding 130 dBs will have *no significant impact* on the environment is patently absurd. 1 2

These combat manuvers will harm not only the environment, but ranchers, businesses and residents. Who in fact will benefit, and what is the justification for the program? The Guard has and will continue to accomplish training proficiency without this additional airspace. In the post Cold War world there cannot be even a thread of military justification for such a potentially destructive and ill conceived program. For the benefit of the environment and all inhabitants of the affected region, we strongly urge that the MOA be scuttled. Thank you for your consideration. 3

Sincerely

Douglas Larsen & Martha Shoman

Douglas Larsen and Martha Shoman

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

The noise models used account for all aircraft in the airspace. Valley walls and mountains can increase or decrease instantaneous noise levels. They do not increase the sound energy emitted from an aircraft, and therefore do not increase the cumulative noise exposure. Noise levels from proposed operations will be well below 130 dB.

Response to Comment No.3

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

479 Green Mountain Drive
Loveland CO 80537
May 28, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Ave.
Andrews AFB MD 20762-5157

Hello,

We are writing to protest the findings that there will be no significant impact from military flights over the southern Colorado mountain and valley areas.

You seem to be completely disrespectful of the large and diverse group of people who have expressed their concerns regarding the flights. You state that such concerns are "subjective". We suggest to you that quality of life is far from subjective; it is how we live, and it is incomprehensible to me that you can summarily dismiss input from the people who will be impacted as "subjective". 1

Your method of Day-Night Averaging is absurd. If this is your view of objective, versus subjective, data, then you are completely disregarding the impact of a very loud aircraft that raises an otherwise low noise level to a very high decibel value. You are not giving even remote consideration to the nature of the impacted area. It is wilderness country, not industrial. The impact of a sudden and intense noise in an otherwise quiet, natural environment cannot be quantified or made objective by using Day-Night Averaging. 2

Re-consider your findings. Pay attention to the local people and the visitors who care about your proposed overflight areas. Eliminate the Airburst MOA, LaVeta MOA, Vr-413, and MTRs leading to Airburst Range from your flight patterns. 3

Sincerely,

Chuck McAfee

Chuck McAfee

Mary E. McAfee

Mary E. McAfee

RESPONSES TO COMMENTS

Response to Comment No.1

The ANG cares about the people that live near their training areas and how they feel about the activity associated with training. The NEPA process is providing the ANG with an opportunity to hear exactly what the public feels about its proposal before any decisions are made. Every scoping comment and every comment on the Draft EIS sent to the ANG has been read and incorporated into the administrative record for the proposal. Public comments have provided a better picture of what subjects the public wanted addressed in the document and have enabled the ANG to improve the EIS by adding or expanding to discussions in the Final EIS. Examples of added or expanded discussions include human health effects, natural quiet, environmental justice, amongst others.

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Response to Comment No.2

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

Response to Comment No.3

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

5-28 96

Dear Program Manager

I am writing to let you know that I am unhappy with the proposal to resume flights in the S.L.V. of Colorado.

I want you ~~to~~ to include & analyze as a viable alternative the work of the Colorado Airspace Initiative Working committee. Explain to me your screening methodology used in determining an official alternative 1 2

I want VR-413 to be eliminated & its proposed Sorties to be assigned to VR-416 3

I demand a revised DEIS with legitimate up to date documentation and that noise impact studies are relevant to the specifics of the affected areas & that noise effects are cumulative that an average for the entire MTR over 24-hours. You need to work with the Co Div of Wildlife Co. State Parks & US Fish & Wildlife Service as to what the true impact is on the environment. F16 modification & their effects on CAI are clearly stated & cumulative impacts for Out-of-State Air force & Air Guard units are included in this revision 4 5

I also demand a Public meeting in Moffat & a Congressional investigation into the amount of money spent (without a normal bidding process) to produce this scientifically unprofessional DEIS 6 7

Thank You
Deborah Michalak
General Delivery
[illegible] 81131

549

RESPONSES TO COMMENTS

Response to Comment No.1

The recommendations from the Working Group, presented in Appendix F, were used to develop the Preferred Alternative. Many of the airspace recommendations included in the Working Group Alternative were incorporated verbatim into the Preferred Alternative and significant portions of the other recommendations also were adopted into the alternative. As such, these recommendations are consequently evaluated in the EIS. The airspace configuration components not adopted were only eliminated after air traffic or environmental conflicts were identified that made their inclusion not feasible. The proposed configuration of military airspace and the route structure were then coordinated with Federal Aviation Administration representatives and is based on its ability to meet existing U.S. Air Force training requirements. The configuration of military airspace for the alternatives considered, including the Preferred Alternative, was derived in part by available unobligated airspace and was designed to avoid airports, instrument approaches, major airways, and known environmentally sensitive areas. The Working Group Alternative has played a very prominent role in the formation of the Preferred Alternative addressed in the EIS.

Response to Comment No.2

The use of other training areas was examined as part of the development of the alternatives studied in detail in the EIS in Subsection 2.3. The proposal was designed to minimize conflicts with potentially sensitive areas while providing the training resources necessary to meet military readiness requirements. Specific narrowing criteria for the selection of military training airspace (see Subsection 2.3.3 in Volume I) were used to evaluate other locations, and no alternative training areas were identified that could be substituted for the airspace configuration proposed in the alternatives studied in the EIS.

The primary user of the airspace included in the Colorado Airspace Initiative is the 140 WG based at Buckley Air National Guard Base in Aurora, Colorado. Because of limited resources and aeronautical constraints, virtually all of our nation's fighter units train in airspace that is within a "tank of gas" of the aircrews' base.

Response to Comment No.3

Military training route VR-413 is an existing airspace currently used for training. Under the Preferred Alternative, its width would be reduced in size to 6 miles. This would significantly reduce the land area under this airspace and would move its eastern boundary away from the Sangre de Cristo Mountains and the Great Sand Dunes National Monument. In addition, its turn point near Mount Blanca would be moved further south. The minimum altitude would be raised from surface to 500 feet above ground level.

Response to Comment No.4

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

Response to Comment No.5

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.6

The hearing locations were selected to ensure the inclusion of a wide geographic representation of potentially interested parties within the affected areas to ensure maximum participation. The availability of meeting rooms with the requisite facilities, that could be reserved on the dates required, also was a significant factor in the selection process. Input from the Citizens Working Group and its members was also considered. These factors were considered more significant than selecting a site primarily on the basis that it might be directly under an airspace.

Response to Comment No.7

All contractors that prepare environmental studies for the ANG are selected through competitive procurements in accordance with the Federal Acquisition Regulations (FAR), including the firms associated with this EIS: Science and Engineering Associates, Inc.; National Security Analysts, Inc.; and Wyle Laboratories.

May 28, 1996

Program Manager CAIEIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews Air Force Base, MD 20762-5152

RE: Colorado Air Space Initiative
Draft Environmental Impact Statement
Custer County

Dear Sirs:

Please take note that I am adamantly against a MOA over Wet Mountain Valley. I am sure with a little effort, that you folks can find a more suitable place to destroy than that peaceful valley. I am a property owner in that valley. I own in excess of 300 acres with residence, and I am adamantly against any MOA there. Currently I am adjacent to a jet way from their airport, and wish no further noise to occur in that valley. It is unthinkable for you to destroy such a serene place. Your study is obviously flawed. In addition, it is my opinion that the people who live and work there should have more to say about what goes on with their lives than you. 1 2

I am sure that the entire state of Nevada and parts of Utah and parts of Southern Colorado are much more conducive to low level flights, look more like a Iran and Iraq, and other related areas than these beautiful Sangre DeCristo mountains. 3

I am sympathetic that young pilots need training to be extremely proficient at their most complicated jobs. However, again, I must stress, not here. 4

Sincerely,

R.P. Musselman, D.O.

cc: Custer County Action Association
P.O. Box 552
Westcliff, Colorado 81252

Governor Roy Rommer
136 State Capital Building
Denver, Colorado 80203-1792

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RESPONSES TO COMMENTS

Response to Comment No.1

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Response to Comment No.2

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.3

The use of other training areas was examined as part of the development of the alternatives studied in detail in the EIS in Subsection 2.3. The proposal was designed to minimize conflicts with potentially sensitive areas while providing the training resources necessary to meet military readiness requirements. Specific narrowing criteria for the selection of military training airspace (see Subsection 2.3.3 in Volume I) were used to evaluate other locations, and no alternative training areas were identified that could be substituted for the airspace configuration proposed in the alternatives studied in the EIS.

The primary user of the airspace included in the Colorado Airspace Initiative is the 140 WG based at Buckley Air National Guard Base in Aurora, Colorado. Because of limited resources and aeronautical constraints, virtually all of our nation's fighter units train in airspace that is within a "tank of gas" of the aircrews' base.

Response to Comment No.4

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

SHIPPED MAY 2 9 1996

From

Samuel Pace
Box 24
Villa Grove CO 81155-0024

To Program Mananger CAI EIS

As a resident of the Villa Grove area in the San Luis Valley I again (I have called several times) protest your flying over my property at super speeds and low altitudes. 1

I specifically disagree that your P.E.I.S. for C.A.I. was fairly done. You seemed to ignore or circumvent the concerns expressed by our Forest Service, Park Service, Division of Wildlife and a professor at A.S.C.

There was no bidding process for this DEIS - its obvious you just paid someone to write you a favorable report. 2

I pay taxes - state + federal - this is my money you are misusing - As a citizen + taxpayer I demand you Come to Maffat Co to answer our questions + defend your seeming misstatements 3

Or just eliminate UR 413 4

At least consider as a viable alternative the plan by Colo Airspace initiative Working Committee - 5

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

All contractors that prepare environmental studies for the ANG are selected through competitive procurements in accordance with the Federal Acquisition Regulations (FAR), including the firms associated with this EIS: Science and Engineering Associates, Inc.; National Security Analysts, Inc.; and Wyle Laboratories.

Response to Comment No.3

The hearing locations were selected to ensure the inclusion of a wide geographic representation of potentially interested parties within the affected areas to ensure maximum participation. The availability of meeting rooms with the requisite facilities, that could be reserved on the dates required, also was a significant factor in the selection process. Input from the Citizens Working Group and its members was also considered. These factors were considered more significant than selecting a site primarily on the basis that it might be directly under an airspace.

Response to Comment No.4

Military training route VR-413 is an existing airspace currently used for training. Under the Preferred Alternative, its width would be reduced in size to 6 miles. This would significantly reduce the land area under this airspace and would move its eastern boundary away from the Sangre de Cristo Mountains and the Great Sand Dunes National Monument. In addition, its turn point near Mount Blanca would be moved further south. The minimum altitude would be raised from surface to 500 feet above ground level.

Response to Comment No.5

The recommendations from the Working Group, presented in Appendix F, were used to develop the Preferred Alternative. Many of the airspace recommendations included in the Working Group Alternative were incorporated verbatim into the Preferred Alternative and significant portions of the other recommendations also were adopted into the alternative. As such, these recommendations are consequently evaluated in the EIS. The airspace configuration components not adopted were only eliminated after air traffic or environmental conflicts were identified that made their inclusion not feasible. The proposed configuration of military airspace and the route structure were then coordinated with Federal Aviation Administration representatives and is based on its ability to meet existing U.S. Air Force training requirements. The configuration of military airspace for the alternatives considered, including the Preferred Alternative, was derived in part by available unobligated airspace and was designed to avoid airports, instrument approaches, major airways, and known environmentally sensitive areas. The Working Group Alternative has played a very prominent role in the formation of the Preferred Alternative addressed in the EIS.

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Program Manager, CIA EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

To Whom It May Concern, May 28, 1996

We understand that the Air National Guard and the Air Force are considering using the air space over the Westcliffe, Colorado area for various F-16 combat maneuvers and training. 1

We have recently purchased 100 acres in Custer County near Westcliffe, Colorado and are building a home there where we will be living permanently beginning in 1997. We understand that there has been an impact study whereby your report shows no significant impact of your proposed combat maneuvers. My father was military and I grew up as a child on air force and army aviation bases. Second, we recently moved from Dallas, Texas where we were very familiar with commercial jet flights near Love Field and naval jet flights from the naval training base in Grand Prairie, Texas. Maybe your study shows that the cattle and horses will be able to coexist with your high decibel jets, but from a human perspective, it is both an irritant and unacceptable.

We can appreciate the country's needs to keep our air national guard and air force in combat readiness. What you are missing, however, is that the Westcliffe area is not some deserted desert where maneuvers that you are proposing will go unnoticed by a large number of residents and visitors. What you must examine is why Custer County one of the top 10 fastest growing counties in the United States. The reason is that the people who are moving to Custer County and more specifically the Westcliffe area are moving there to get away from the very item that you are proposing. We are sure you are aware that Westcliffe is a good hour to hour and 1/2 away from any major city. People who are moving there are taking on this long commute in order to get away from city congestion which consists largely of noise levels. 2

RESPONSES TO COMMENTS

Response to Comment No.1

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Response to Comment No.2

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.3

The use of other training areas was examined as part of the development of the alternatives studied in detail in the EIS in Subsection 2.3. The proposal was designed to minimize conflicts with potentially sensitive areas while providing the training resources necessary to meet military readiness requirements. Specific narrowing criteria for the selection of military training airspace (see Subsection 2.3.3 in Volume I) were used to evaluate other locations, and no alternative training areas were identified that could be substituted for the airspace configuration proposed in the alternatives studied in the EIS.

The primary user of the airspace included in the Colorado Airspace Initiative is the 140 WG based at Buckley Air National Guard Base in Aurora, Colorado. Because of limited resources and aeronautical constraints, virtually all of our nation's fighter units train in airspace that is within a "tank of gas" of the aircrews' base.

You should try coming to Westcliffe and standing outside and just listening. You will find two items apparent quite quickly: either you will hear absolutely nothing or you will hear an owl screeching a few miles away (and you can do that 24 hours a day). When your jets come screaming through our valley, all we will hear is the sound of your engines and their aftermath. You might also try running this same experiment when standing in a community or city that may be considered small but 20 - 50 times larger than Westcliffe. You will find that because of the constant roar of the city, the commercial jets or your military jets will be nowhere near as predominant or irritating.

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We suggest you consider two other alternatives. Find an area which is much more remote than the Westcliffe valley (most known for the Wet Mountain valley) which is becoming a retirement and vacation community. One only needs to fly over many parts of New Mexico, Utah, Nevada, Arizona and even some more remote areas of Colorado to find much more remote areas than the Westcliffe valley. Or secondly, fly up and down the I25 corridor and you'll find that no one will complain because no one will hear you.

3

Sincerely,

Douglas J. Schulz
Tracy Pride Stoneman, Esquire

Currently residing at:
3132 Westcliff Drive West
Colorado Springs, CO 80906
719-579-0779

To: Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD

5/28/96

My wife and I are writing to express our concerns dealing with the recent Draft Environmental Impact Statement on the Custer County Colorado Airspace Initiative that the Air National Guard intends to implement. We have purchased property in this county with the intention of having a peaceful, quiet place to live, enjoying the wildlife in the area. 1

According to the Draft EIS, the noise that a jet makes would be over 110 decibels, averaged over a twenty-four period to below 65 decibels. The Federal Interagency Committee for Noise (FICON) says that an average noise level above 65 decibels is annoying for *communities next to commercial airports*. Since the proposed Air National Guard Military Operations Area (MOA) and Military Training Route are *military operations*, how can a standard used for commercial airports be used in comparison? 2,3

We are greatly concerned over the potential risks of jet crashes, forest fires, loss of property values, the adverse effect on the area wildlife, noise pollution, detrimental environmental effects, and deterioration of the local economy. If we had wanted to settle in an area that had these potential risks and problems, we would have bought property next to a major commercial airport, not in this beautiful valley. Now moving onto our property seems to be jumping from the frying pan into the fire as a result of these military proposals. 4

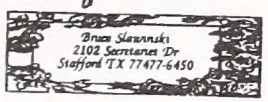
As taxpayers, we must insist on the elimination of Airburst MOA, La Veta MOA, and all MTRs leading to the Airburst Range. Why not save the area environment, *and* save the taxpayers money by utilizing an existing, mothballed, base, such as Fitzsimmons in Aurora, Colorado? 5

Thank you for your time and patience on this important issue.

Respectfully yours,

Bruce Slawinski

Caryn Slawinski



RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

The approach used in the EIS has been modified. The Federal Interagency Committee on Noise (FICON), representing a variety of Federal agencies with a mix of concerns associated with aircraft noise, reviewed aircraft noise analyses issues in 1992. This committee's report (FICON 1992) continued an approach to evaluating relative impacts associated with aircraft noise that has been recognized by noise analysis experts as the most widely endorsed and comprehensive approach to aircraft noise analysis available. This approach to noise analysis was incorporated into the analyses associated with the Draft EIS. In general, Federal land use compatibility criteria are derivatives of guidelines first devised for land near airports. All land use compatibility is based on the use of Day-Night Average Sound Level (abbreviated as DNL or Ldn) as the descriptor representing community noise environments. The criteria treat areas below DNL 65 dB as compatible for all uses, including residential, and they treat DNL 65 dB as a threshold for significant exposure. There is no generally accepted method for treating rural areas differently for these purposes.

However, many EIS reviewers, including some members of the Federal regulatory community, felt the application of the FICON standards, and the 65 dB threshold, to a rural setting was inappropriate for such areas with more quiet ambient noise conditions. Consequently, the use of the 65 dB threshold as the sole means to assess relative impacts or the acceptability of noise levels associated with aircraft operations addressed in the EIS has been modified and the analysis now includes additional information to evaluate potential impacts.

Response to Comment No.3

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

Response to Comment No.4

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.5

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

The City of Cañon City

Box 1460
Cañon City, Colorado 81215-1460

May 28, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD. 20762-5157

RE: Draft Environmental Impact Statement for the Colorado Airspace Initiative

Dear Program Manager:

The Cañon City Council appreciates the modifications which removed Cañon City from any military operating area. We are still concerned, however, by the potential impact of the new operating area east of the Fremont County Airport. This creates potential conflicts between military aircraft in training and civilian aircraft approaching or departing the County airport. This could be a detriment to the airport's future growth and Fremont County's economic development efforts. 1

Sincerely,

Steve Thacker

Steve Thacker
City Administrator

ST/sh
cc: Mayor and Council

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RESPONSES TO COMMENTS

Response to Comment No.1

Analyses associated with the EIS assessed the potential conflicts between operations of military and civilian aircraft at airports, along air routes, and in other operational areas. It was determined that there are no major conflicts with local operations that cannot be made safe through continuous education and awareness programs. Military pilots at the 140 WG and transient pilots who fly the airspace for which the 140 WG has scheduling and management responsibility are made aware of local operations such as crop dusting, airports, and airways, including operations out of the Fremont County. These awareness programs, along with FAA restrictions to remain at least 1,500 feet above or three miles laterally from airports, should ensure safe operations with minimum disruptions to military and civilian aircraft.

1971 Steve Thacker

5-29-96

AIR NATIONAL GUARD READINESS CENTER
DEAR: PROGRAM MANAGER, CAI-EIS
ANGRC/CEVP
3500 FETCHET AVE.
ANDREWS AFB MD 20762-5157

I AM WRITING IN PROTEST OF THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE COLORADO AIRSPACE INITIATIVE.

"THE TWO VOLUME, TWO AND ONE-HALF INCH THICK DOCUMENT IS ONE OF THE MOST EXTENSIVE ENVIRONMENTAL STUDIES EVER UNDERTAKEN BY THE AIR NATIONAL GUARD." YET FOR EVERY SINGLE ISSUE AND CONCERN RAISED BY CITIZENS IN THE SCOPING HEARINGS AND IN WRITTEN COMMENT TWO YEARS AGO, THE DEIS COMES OUT WITH FONSI, (FINDING OF NO SIGNIFICANT IMPACT). THE STUDY FINDS THAT THOUSANDS OF JETS FLYING AT LOW ALTITUDES THROUGHOUT OUR AREA WILL HAVE NO IMPACT IN TERMS OF NOISE, SAFETY, ECONOMICS, OR ANYTHING ELSE.

HOW CAN A DRAFT ENVIRONMENTAL IMPACT STATEMENT OF THIS MAGNATUDE FIND NO SIGNIFICANT IMPACT ON EVERY ISSUE? WITH SO MANY ISSUES RAISED BY SO MANY INDIVIDUALS, POLITICAL LEADERS, WILDERNESS GROUPS, AGRICULTURAL GROUPS, HEALTH AND SAFETY GROUPS, PILOT ORGANIZATIONS, SPIRITUAL ORGANIZATIONS, ECONOMIC GROUPS, EDUCATIONAL FACILITIES AND CITIZEN ACTION GROUPS HOW CAN A DRAFT ENVIRONMENTAL IMPACT STATEMENT ANSWER FONSI TO EACH AND EVERY ONE?

I BELIEVE THAT THE ONLY WAY THAT THIS IS POSSIBLE IS IF THE PREPARER OF THE DEIS WAS BIASED IN FAVOR OF THE AIR NATIONAL GUARD. I HAVE BEEN OPPOSED ALL ALONG TO THE AIR NATIONAL GUARD HIRING A FIRM OF THIER OWN CHOICE TO DO THIS DEIS. THE AIR NATIONAL GUARD HAS HIRED THE SCIENCE AND ENGINEERING ASSOC., A COMPANY MADE UP OF MANY RETIRED AND EX. MILITARY PERSONEL. A COMPANY THAT IS REGULARLY HIRED BY THE MILITARY AND OBVIOSLY BY THE LOOKS OF THIS DEIS BIAS IN FAVOR OF THE MILITARY AND AIR NATIONAL GUARD.

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1

RESPONSES TO COMMENTS

Response to Comment No.1

All contractors that prepare environmental studies for the ANG are selected through competitive procurements in accordance with the Federal Acquisition Regulations (FAR), including the firms associated with this EIS: Science and Engineering Associates, Inc.; National Security Analysts, Inc.; and Wyle Laboratories.

198L E. Christopher Burdekin

I WILL NOT MAKE COMMENTS OR STATEMENTS ABOUT ANY INDIVIDUAL ISSUE OR CONCERN OR EVALUATION OF THEM WITHIN THIS DEIS. I WILL NOT BECAUSE I BELIEVE IT TO BE BIASED AND THEREFORE WORTHLESS.

I WILL ASK THE AIR NATIONAL GUARD AND THE SCIENCE AND ENGINEERING ASSOC. TO RESPOND TO THIS ACCUSATION OF BIAS.

I ALSO ASK THAT THERE BE A NEW ORGANIZATION HIRED TO DO A PROPER DEIS. THIS ORGANIZATION SHOULD BE CHOSEN BY A COMMITTEE MADE UP OF: ONE PERSON FROM THE AIR NATIONAL GUARD, ONE FROM THE FAA, GOV. ROY ROMER, ONE FROM THE COLORADO PUBLIC INTEREST RESEARCH GROUP (CoPIRG), ONE FROM THE COLO. STOCKMEN'S ASSOCIATION, AND ONE FROM THE CUSTER COUNTY ACTION ASSOC.

THANK YOU FOR READING THIS AND I HOPE YOU WILL TAKE THE TIME TO RESPOND.

SINCERELY,

E. CHRISTOPHER BURDEKIN
P.O. BOX 14 GARDNER
CO 81040

E. Christopher Burdekin

562

MEMORANDUM

DATE: 05-29-96

TO: PROGRAM MANAGER, CAI EIS

I WANT TO EXPRESS MY CONCERNS WITH THE MILITARY'S OPERATIONS AND THE MILITARY TRAINING ROUTES OVER THE "WET VALLEY" AREA IN AND AROUND WESTCLIFF, COLORADO.

IN SEPTEMBER, MY WIFE AND I BOUGHT LAND IN CUSTER COUNTY, WITH THE INTENTIONS OF BUILDING A HOME THAT WE MAY RETIRE TO. THE REASON WE SELECTED WESTCLIFF WAS THE FACT THAT THE VALLEY SEEMED SO QUIET AND PEACEFUL. 1

NOW IT SEEMS THAT THE MILITARY WANTS TO INCREASE TRAINING FLIGHTS OVER THE AREA WHICH WOULD DESTROY WHAT WE ARE SO DESPARATELY WANTING, "PEACE AND QUIET". I FEEL THAT THE INCREASED TRAINING FLIGHTS WOULD HAVE AN ADVERSE EFFECT ON WILDLIFE, LOWER PROPERTY VALUES, LOWER THE ECONOMY AND QUALITY OF LIFE, AND CREATE EXTREME AND UNBEARABLE NOISE LEVELS. 2

LIVING IN A METROPLEX AREA, I HAVE EXPERIENCED AIRCRAFT NOISE. IT'S BAD ENOUGH IN AN EXTREMELY POPULATED METROPLEX AREA BUT IT WOULD BE "UNBEARABLE" IN THE QUIET "WET VALLEY" AREA.

IF THE MILITARY INSISTS ON INCREASING THE TRAINING FLIGHTS IN THE "VALLEY " AREA, WE WILL PUT OUR LAND ON THE MARKET AND LOOK ELSEWHERE FOR RETIREMENT. 3

I HOPE YOU LISTEN TO THE PEOPLE OF CUSTER COUNTY, COLORADO AND NOT DESTROY THE "VALLEY". EVERY ONE HAS WORKED TOO HARD TO PRESERVE ONE OF THE MOST BEAUTIFUL AREAS IN AMERICA.

THANKS FOR YOUR TIME AND CONSIDERATION.

Robert & Vickey Davis

ROBERT AND VICKEY DAVIS
501 ASH LANE
LANCASTER, TEXAS 75146

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

There would be some changes in sortie numbers, noise levels, and airspace dimensions under the Original Proposal and the Preferred Alternative addressed in the EIS. However, overall flying hours of the 140 WG will be reduced from 5005 hours to 4600 hours. When compared to existing military aircraft training in the study area, these changes would not change the current levels of solitude and peace and quiet experienced by residents. As under current conditions, noise from military aircraft operations may periodically disturb citizens and affect their enjoyment of solitude; however, opportunities for abundant periods of total peace and quiet would continue as under present conditions.

Response to Comment No.3

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

May 29, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Ave.
Andrews AFB, MD 20762-5157

To whom it may concern:

I'm writing in regard to the Colorado Airspace Initiative - Draft Environmental Impact Statement.

My husband and I are buying property in Custer County and are planning to build there within a couple of years. It has been a lifelong dream of ours to live in Colorado in a peaceful environment. 1

I can't begin to describe how distressed we are about the possibility of MOAS and MTRS over our valley. There is no doubt in our mind that this will create an incredible negative impact on the way of life in the area, not only for the property owners but for the wildlife as well. 2

We understand that DEIS is claiming that there will be no impact on our valley based on the day-night averaging type of noise-analysis. We know this is a ridiculous standard to apply to a very quiet setting as opposed to a community next to an airport. 3

We loudly and emphatically protest this initiative and will continue to oppose it until we are assured of the elimination of Airburst MOA, LaVeta MOA and all MTRs leading to the Airburst Range. This must be stopped! 4

Thank you for hearing our concerns and for stopping this initiative.

Sincerely,
/Kati Harbuck

cc: Custer County Action Assoc.
P.O. Box 552
Westcliffe, CO 81252

Governor Roy Romer
136 State Capital Bldg.
Denver, CO 80203-1792

Senator Hank Brown
716 Hart Senate office Bldg.
Washington, DC 20510

Congressman Scott McInnis
512 Cannon office Bldg.
Washington, DC 20515-06

Senator Ben NightHorseCampbe
3880 Rossell Senate office Bld
Washington, DC 20510

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RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

RESPONSES TO COMMENTS

Response to Comment No.3

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

Response to Comment No.4

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

JOHNSON and JOHNSON, P.C.
ATTORNEYS AT LAW
100 Arapahoe, Suite 14
Boulder, Colorado 80302

Dale E. Johnson
Elaine T. Johnson

(303) 449-5500
Fax (303) 938-9703

May 29, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

Re: Environmental Impact/Air National Guard's Airspace Plan

566

Dear Sir:

This letter is written to express my extreme concern about the potential expansion and/or implementation of the Air National Guard's Airspace Plan over the San Luis Valley in Colorado.

My family settled this area at the turn of the century. I was raised there and continue to own land in the area. During the past several years, there has been increasing concern from the local residents about the extreme disruption caused by low-flying aircraft. Members of my family have been "buzzed" by these planes and, in one instance, my aunt suffered permanent hearing loss when a plane swooped very low to her automobile. Actions such as this, demonstrate a lack of respect for the citizens of this area and should not be allowed. Clearly, these flights should be totally terminated and expansion should not be considered. 1,2

I was recently informed that a Draft Environmental Impact Statement concluded that there is no significant environmental impact to the training exercises. This is inconceivable. The San Luis Valley is a pristine and peaceful setting. It contains wildlife sanctuaries and preserves a lifestyle and environment which is quickly disappearing in Colorado. The low-flying aircraft create an extreme disruption to the quality of life. This is an unacceptable intrusion into this area.

I urge you to immediately cease all operations of the Air National Guard over the San Luis Valley. 3

Yours truly,

Elaine T. Johnson

ETJ:as
c Custer County Action Association

RESPONSES TO COMMENTS

Response to Comment No.1

The ANG takes the public's concerns about pilot accountability very seriously. Any misconduct by a military pilot is a serious matter. If a member of the public is experiencing any problems with the military's operations in any of the airspace in an area that affects a person directly, the public affairs officer at the nearest military installation should be contacted immediately, or call (800) 582-8507.

The Federal Aviation Administration and each military service have very strict rules to ensure pilots stay within defined training airspace. The rules govern minimum altitudes, maximum speed, and type maneuvers that can be performed inside and outside designated training airspace. Military commanders have the authority to suspend pilots who willfully violate flight rules, such as flying outside designated training airspace. The military closely manages the airspace they use to ensure they do not exceed planned parameters.

Response to Comment No.2

Since its inception, the toll-free number (800) 582-8507 has helped the ANG to monitor and reduce the number of aircraft noise complaints. All calls to the number are taken seriously regardless of how the caller characterizes the complaint. If callers are not satisfied with the 800-number service, experience future problems with the toll-free number, or feel they are not getting a timely response, an alternative is to call the 140 WG Commander at (303) 340-9555.

Response to Comment No.3

Many citizens have expressed concern that their quality of life, which is based directly on the kind of lifestyle that they can enjoy while residing in or visiting the State of Colorado, will be changed by implementation of the CAI. The U.S. Air Force, including the ANG, has been conducting military aircraft operations in the Wet Mountain Valley and the San Luis Valley areas where people are most concerned for approximately 25 years. Most of the military airspace proposed under any of the alternatives is currently in use. Commercial aircraft overflights have also been taking place and will continue to do so. Citizens may notice changes in military aircraft overflights in certain areas associated with the CAI. The number of sorties are proposed to increase moderately in portions of the study area and decrease in others. Overall sorties will be reduced from 5,441 to 4,909 under the Preferred Alternative. The bottom altitudes of several airspaces where citizens are most concerned have been raised to reduce noise levels. Therefore, existing quality of life should not be changed.

May 29, 1996

Program Manger CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews Air Force Base, Maryland 20762-5157

RE: Air National Guard MOAs and MTRs

Dear Sir or Madam:

I am writing to vehemently protest the interim EIS regarding the Wet Mountain Valley, Westcliffe, Colorado. I own land in Silver Cliff and can not believe that the government could publish a draft EIS that purported to claim no impact or acceptable impact would be made on this valley from overflights. The measurements for noise over this valley, according to the draft or interim EIS, are calculated on an average 24 hour basis. This is not accurate. It does not reflect the present state of calm serene silence (lack of noise) that exists in this valley. Averaging presents a false picture of the impact of noise in this place. 1

Using a measurement for noise in an airport application is not appropriate in this location. There will be noise impact here. These overflights are horrendously noisy. The noise will impact humans and it will impact wildlife. These flights will cover not just common areas of present travel but also they will cover and disturb the interior woodland areas. Animals mating and birthing will be impacted by the random noise. Their safety will be effected. 2 3

RESPONSES TO COMMENTS

Response to Comment No.1

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

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RESPONSES TO COMMENTS

Response to Comment No.2

The approach used in the EIS has been modified. The Federal Interagency Committee on Noise (FICON), representing a variety of Federal agencies with a mix of concerns associated with aircraft noise, reviewed aircraft noise analyses issues in 1992. This committee's report (FICON 1992) continued an approach to evaluating relative impacts associated with aircraft noise that has been recognized by noise analysis experts as the most widely endorsed and comprehensive approach to aircraft noise analysis available. This approach to noise analysis was incorporated into the analyses associated with the Draft EIS. In general, Federal land use compatibility criteria are derivatives of guidelines first devised for land near airports. All land use compatibility is based on the use of Day-Night Average Sound Level (abbreviated as DNL or Ldn) as the descriptor representing community noise environments. The criteria treat areas below DNL 65 dB as compatible for all uses, including residential, and they treat DNL 65 dB as a threshold for significant exposure. There is no generally accepted method for treating rural areas differently for these purposes.

However, many EIS reviewers, including some members of the Federal regulatory community, felt the application of the FICON standards, and the 65 dB threshold, to a rural setting was inappropriate for such areas with more quiet ambient noise conditions. Consequently, the use of the 65 dB threshold as the sole means to assess relative impacts or the acceptability of noise levels associated with aircraft operations addressed in the EIS has been modified and the analysis now includes additional information to evaluate potential impacts.

Risk of crashes is not adequately addressed in the DEIS. Not only the fire danger, the wildlife impact, the impact on structures and other potential costs. The purpose of the EIS has not been met when issues like this have not been adequately addressed. These are public and private costs. Taxpayer monies have funded this DEIS and the result is not up to par. 4

With all of this comes environmental economic loss. Where are the estimates of the loss on this wildlife and human communities, growth and change? These belong in the EIS because many of them are tied to environmental businesses, or businesses that derive their primary or secondary customer from environmental assets in this valley. Where are the costs estimates and calculations for the environment of this valley in a broad sense? The loss of food, the decrease in guide income? 5

And the true sick thing about his project, is that the military ALREADY HAS TRAINING AREAS, AND THEY ALREADY HAVE OPERATIONS AREAS, in neighboring Utah. So none of this is necessary. And in the balance of viewing the benefit that the military gains from ruining a pristine area, one has to look at the fact that this is the second such training ground. But this is a unique valley, with bountiful wilderness and priceless beauty. And it truly would be a crime to take this national asset and make it just another toy for the military. 6

Check the figures in the DEIS and the rationale, especially in applying the Day Night Averaging analysis to this valley. This is not reasonable. This is not credible.

Sincerely,

Katherine L. Letson

Katherine L. Letson
Box 1084
Silver Cliff, Colorado 81252

Response to Comment No.3

Studies conducted on wildlife have shown that numerous wildlife species have the ability to adapt to the presence of man and various man-made sound sources, including jet aircraft noise. While the noise generated from low-altitude military overflights may be initially startling, habituation to jet aircraft noise occurs with most wildlife species. Species-specific responses to low-altitude overflights vary considerably, and responses from individual animals may have the potential to cause injury. However, wildlife populations are usually affected only when a variety of factors work in combination to impact them, including declines or fluctuations in the availability of a food source, habitat destruction or alteration, predation, hunting, trapping, poaching, disease, or inclement weather, rather than noise alone. Normally, it would be unrealistic to predict or attribute any wildlife population declines to a single stressor, such as noise. In addition, no published scientific evidence was identified that indicated harm may occur to wildlife as a result of exposure to the levels of noise generated by military aircraft that would utilize the airspace associated with the Colorado Airspace Initiative.

Response to Comment No.4

The fire potential associated with aircraft overflights is generated from the potential for an aircraft crash or the use of flares in training. The EIS evaluated the potential for an aircraft crash resulting from the proposal. This evaluation determined that the likelihood of an aircraft crash would be very low. Therefore, the potential for a fire resulting from an aircraft crash would also be very low. In fact, military accidents have declined in the past decade, as described in the February 1996 report of the General Accounting Office, an organization under the U.S. Congress.

Authorized users of the airspace have proposed the continued use of flares in their training. However, the flares would not be released below 2,000 feet AGL. Once a flare is released, it ignites immediately. The burn time for a flare is approximately 4.0 to 4.5 seconds. In those 4.0 to 4.5 seconds, the flare falls approximately 500 feet. This leaves a safety margin of approximately 1,500 feet to allow for a flare that burns for more than 4.5 seconds to extinguish itself. The 140 WG has no knowledge of any fires being caused by flares released during current training missions by any aircraft utilizing Colorado Airspace Initiative airspace.

Response to Comment No.5

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.6

The use of other training areas was examined as part of the development of the alternatives studied in detail in the EIS in Subsection 2.3. The proposal was designed to minimize conflicts with potentially sensitive areas while providing the training resources necessary to meet military readiness requirements. Specific narrowing criteria for the selection of military training airspace (see Subsection 2.3.3 in Volume I) were used to evaluate other locations, and no alternative training areas were identified that could be substituted for the airspace configuration proposed in the alternatives studied in the EIS.

The primary user of the airspace included in the Colorado Airspace Initiative is the 140 WG based at Buckley Air National Guard Base in Aurora, Colorado. Because of limited resources and aeronautical constraints, virtually all of our nation's fighter units train in airspace that is within a "tank of gas" of the aircrews' base.

2021 Katherine L. Letson

571

Michael S. Mackey
94-1040 Anania Circle #66
Mililani, HI 96789

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157
May 29, 1996

Dear Sirs:

I am writing this letter to inform all concerned parties of the proposed Colorado Airspace Initiative that I, along with all other owners and residents of Westcliffe, Colorado, strongly object to the proposed new Airburst and La Veta Air Guard Military Operations Areas (MOAs) and their attendant Military Training Routes leading to the Airburst Range. The Draft Environmental Impact Statement (DEIS) is a shameful attempt to deceive everyone. The noise analysis used in the DEIS is Day-Night averaging, meaning that any sudden loud disturbing noise, such as that produced by any of the myriad flyng machines of the Air National Guard, would be averaged over a twenty four hour period with the incredibly quiet that our valley now enjoys, and thus would be far below the 65 decible level that the DEIS states is annoying to communities next to commercial airports. According to the DEIS, these sudden bursts of 110 decibles or greater would have no impact on our valley. By this logic, if I dragged a chicken through a swimming pool I would have chicken soup!

This unavoidable noise pollution that would accompany the MOAs would destroy the very reason I invested in Custer County...my intention to retire in a remote, QUIET, peaceful rural area free from city traffic, commercial and military air traffic, and other such disturbances. I presently live in Hawaii, which has a high number of military bases, so I am quite familiar with the type of noise and disturbances that such MOAs and MTRs can produce. To bring this type of activty to the Westcliffe area would destroy the quality of life that I invested in, ruin the economic viability of my investment due to loss of property value, and pose a high risk of detrimental environmental effects and adversly affect wildlife.

The Custer County Property Owners do not want the Colorado Airspace Initiative rammed down our throats!!

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Respectfully,

Michael S. Mackey

MSM:msf

cc: Gov. Roy Romer
Sen. Hank Brown
Sen. Ben Nighthorse Campbell
Congressman Scott McInnis

Custer County Action Assoc.

RESPONSES TO COMMENTS

Response to Comment No.1

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Response to Comment No.2

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

Response to Comment No.3

There would be some changes in sortie numbers, noise levels, and airspace dimensions under the Original Proposal and the Preferred Alternative addressed in the EIS. However, overall flying hours of the 140 WG will be reduced from 5005 hours to 4600 hours. When compared to existing military aircraft training in the study area, these changes would not change the current levels of solitude and peace and quiet experienced by residents. As under current conditions, noise from military aircraft operations may periodically disturb citizens and affect their enjoyment of solitude; however, opportunities for abundant periods of total peace and quiet would continue as under present conditions.

Response to Comment No.4

Many citizens have expressed concern that their quality of life, which is based directly on the kind of lifestyle that they can enjoy while residing in or visiting the State of Colorado, will be changed by implementation of the CAI. The U.S. Air Force, including the ANG, has been conducting military aircraft operations in the Wet Mountain Valley and the San Luis Valley areas where people are most concerned for approximately 25 years. Most of the military airspace proposed under any of the alternatives is currently in use. Commercial aircraft overflights have also been taking place and will continue to do so. Citizens may notice changes in military aircraft overflights in certain areas associated with the CAI. The number of sorties are proposed to increase moderately in portions of the study area and decrease in others. Overall sorties will be reduced from 5,441 to 4,909 under the Preferred Alternative. The bottom altitudes of several airspaces where citizens are most concerned have been raised to reduce noise levels. Therefore, existing quality of life should not be changed.

1523 Park Avenue
Cañon City, Colorado 81212
May 29, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

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Gentlemen:

I am writing to protest your so-called Environmental Impact Statement and plan to fly National Guard training flights over the Westcliffe and Custer County area.

While we do not live there we did have a cabin in the County several years ago, so are familiar with the area and the damage your flights could do to the quality of life there.

This is one of the very few areas left where the rural and wild nature still is. It isn't exactly an easy area in which to live having some privations but it does give peace and solitude to those who live there. Must this also be destroyed as so many other natural areas in line with with selfish desires of a few. - 1

Back to the Environmental Impact Statement. These are always made with the answer it must reach predetermined . In this case the answer reached is false.

Very truly yours.

Evelyn Merwin

Evelyn Merwin

RESPONSES TO COMMENTS

Response to Comment No.1

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.



May 29, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Ave.
Andrews AFB, MD 20762-5157

Sir:

I am a land owner in Custer County. I recently received the Draft Environment Impact Statement (DEIS) for the Air National Guard Military Operations Areas for the proposed Colorado Airspace Initiative (CAI). The Initiative is appalling and the DEIS is ridiculous.

Custer County is a quiet, rural area. The DEIS noise analysis compares Custer, Huerfano and Saguache counties to communities next to commercial airports! It is absurd to compare urban neighborhoods by commercial airports to sparsely populated counties filled with wildlife. 1

It is impossible to gage the effects that the Military Training Routes will have on the people, wildlife, domestic livestock, and air quality in our area with 17,000 overflights per year (as proposed by the CAI). 2

The DEIS concluded there would be a 3/100 percent increase in primary pollutants which is well below levels considered "significant." Any increase in airborne pollutants is too much in an area as pristine as Custer County. 3

It would take just one plane crash or malfunction to start a fire that could decimate thousands of acres of forest, plants, animals and personal property. Currently, the Sangre de Christo and Wet mountains are in a drought which only makes the situation that much more dangerous (as the current bout of wildfires in the west will testify). The Sangres have already been stressed for over 100 years by mainly human intervention so it would take very little to torch a very large area. 4

"Military aircraft carry hazardous material that may be released," says the DEIS. EPA classifies one of those chemicals, hydrazine, as a hazardous material due to its **flammability** and **toxicity** to humans. Exposure to high concentrations can result in lost of consciousness and blindness. Long term damage is possible to liver and kidneys. 5

ALL TERRAIN ENGINEERING
3012 HWY 74
EVERGREEN, CO 80439
(303) 674-9704

575

RESPONSES TO COMMENTS

Response to Comment No.1

The approach used in the EIS has been modified. The Federal Interagency Committee on Noise (FICON), representing a variety of Federal agencies with a mix of concerns associated with aircraft noise, reviewed aircraft noise analyses issues in 1992. This committee's report (FICON 1992) continued an approach to evaluating relative impacts associated with aircraft noise that has been recognized by noise analysis experts as the most widely endorsed and comprehensive approach to aircraft noise analysis available. This approach to noise analysis was incorporated into the analyses associated with the Draft EIS. In general, Federal land use compatibility criteria are derivatives of guidelines first devised for land near airports. All land use compatibility is based on the use of Day-Night Average Sound Level (abbreviated as DNL or Ldn) as the descriptor representing community noise environments. The criteria treat areas below DNL 65 dB as compatible for all uses, including residential, and they treat DNL 65 dB as a threshold for significant exposure. There is no generally accepted method for treating rural areas differently for these purposes.

However, many EIS reviewers, including some members of the Federal regulatory community, felt the application of the FICON standards, and the 65 dB threshold, to a rural setting was inappropriate for such areas with more quiet ambient noise conditions. Consequently, the use of the 65 dB threshold as the sole means to assess relative impacts or the acceptability of noise levels associated with aircraft operations addressed in the EIS has been modified and the analysis now includes additional information to evaluate potential impacts.

Response to Comment No.2

Under the Preferred Alternative, the maximum number of sorties for the Colorado Airspace Initiative would decrease from 5,441 sorties to 4,909 sorties per year.

Response to Comment No.3

Comment Noted. Text in Section 4.8.8.1 has been changed to read as follows: "As shown in Table 4-109, the Original Proposal Alternative would represent less than 3/100 percentile of Class I PSD limits and no measurable change in NAAQS."

THE DEIS cites that all endangered species in the Region of Influence (ROI) would not be affected. The Bald Eagle is know to nest within the ROI as well as the Mexican Spotted Owl, Short Tailed Grouse and the American Peregrine Falcon. The noise created by the overflights would not effect the birds according to the DEIS. Who determined this? If the current flyovers already bother people in the area, it stand to reason that an increase would bother us more not to mention these sensitive species. Who speaks for them? Certainly not the government who seems to be deaf to the protestations of the "humans" who live in the area? 6

With the down sizing of the military, why does the Air National Guard need to increase its military training and why over our area? Besides adversely affecting the wildlife, the flights would cause tourism and property values to plummet. People come to see the beauty of this area and to hear the beautiful music of nature. Imagine that interrupted by the noise of the MOAS. And the DEIS thinks this is "acceptable" ? 7, 8, 9

The shear magnificence of the Wet Mountain Valley and San Luis Valley must be maintained, not just for those of us who enjoy this area now but for future generations. Really, what will be the long term effect on an area like this be?

The winged and four legged ones are more important than all of us. They do not have a voice to object to man's interventions. Listen to their silence and allow those of us who live here to enjoy that silence. 10

You are a public servant. Listen to what the public is saying, "NO TO MOA!"

Sincerely,

Mark Petry

cc: Custer County Action Assoc.
P.O. Box 552
Westcliffe, CO 81252

Governor Roy Romer
136 State Capital Bldg.
Denver, CO 80203-1792

Congressman Scott McInnis
512 Cannon Office Bldg.
Washington, DC 20515-0603

Senator Hank Brown
716 Hart Senate Office Bldg.
Washington, DC 20510

Senator Ben Nighthorse Campbell
3880 Russell Senate Office Bldg.
Washington, DC 20510

RESPONSES TO COMMENTS

Response to Comment No.4

The fire potential associated with aircraft overflights is generated from the potential for an aircraft crash or the use of flares in training. The EIS evaluated the potential for an aircraft crash resulting from the proposal. This evaluation determined that the likelihood of an aircraft crash would be very low. Therefore, the potential for a fire resulting from an aircraft crash would also be very low. In fact, military accidents have declined in the past decade, as described in the February 1996 report of the General Accounting Office, an organization under the U.S. Congress.

Authorized users of the airspace have proposed the continued use of flares in their training. However, the flares would not be released below 2,000 feet AGL. Once a flare is released, it ignites immediately. The burn time for a flare is approximately 4.0 to 4.5 seconds. In those 4.0 to 4.5 seconds, the flare falls approximately 500 feet. This leaves a safety margin of approximately 1,500 feet to allow for a flare that burns for more than 4.5 seconds to extinguish itself. The 140 WG has no knowledge of any fires being caused by flares released during current training missions by any aircraft utilizing Colorado Airspace Initiative airspace.

Response to Comment No.5

The use and characteristics of hydrazine and other hazardous materials associated with military aircraft operations is discussed in EIS Section 3.1.12.

Response to Comment No.6

The ANG has been and will continue to work with the U.S. Fish and Wildlife Service, the Colorado Department of Natural Resources, the Bureau of Land Management, and other regulatory agencies to study the effects of their actions on threatened and endangered species within the areas affected by its operations. Representatives from these organizations meet periodically in a Coordination Group to discuss and study species of concern. Some ongoing study activities are currently funded by the ANG, including a study with the U.S. Forest Service on the Mexican Spotted Owl. The ANG will continue this cooperative effort and adjust its operations should any of these studies identify potential impacts on any threatened or endangered species.

Response to Comment No.7

Training for potential military conflict in time of peace is a reality recognized by the Congress and the President. As military forces are cut back, the quality of training for existing forces must be maintained and improved to ensure our nation has an effective military. As the active duty military force is reduced in size, the ANG role and the role of the 140 WG in the total force structure is increasing. Over the past several years, the DOD has conducted studies to evaluate mission readiness and cost effectiveness of its total force. In comparison to DOD regular components, the ANG has relatively low operating costs and provides a cost effective investment.

Response to Comment No.8

The role of tourism in the local economy, and its impact from the alternatives associated with the CAI, have been studied in the EIS as a part of the evaluation of socioeconomic impacts. There are a number of factors, other than aircraft operations, that may affect tourism and the use of recreational areas, including weather, the proximity of other attractions in the area, and the economy. While it is possible that a tourist visiting an area may find an aircraft overflight to be annoying, no significant change to the tourist industry would be expected considering the fact that the majority of the CAI airspace has existed for many years and the relevant influences from military aircraft operations are not changing in the study area. The contribution of tourism earnings to total industry earnings was presented in the EIS for each airspace. In all instances, these values were very consistent with overall state levels of tourism earnings as compared to industry earnings.

Response to Comment No.9

In order to address concerns regarding possible devaluation of real estate, the EIS evaluated historical data for property values. This analysis compares counties within the study area for the CAI, including those areas with currently utilized military airspace, to counties outside the study area. The results indicate that all counties experienced increases in property values. Further, in terms of median property values, counties within the study area for the CAI increased 99.71 percent compared to counties outside the study area, which increased 57.74 percent. Whereas a report published by the Federal Aviation Administration concludes "that noise has been shown to decrease the value of property by only a small amount--approximately 1 percent decrease per decibel (DNL)," this analysis applies to airport/airfield environments and not land areas underlying military training airspace. Therefore, although it is not possible to absolutely conclude that counties experiencing military aircraft overflights incur any greater change in real estate values than counties not experiencing similar overflight activity, it is not likely that real estate values would drop as a result of the CAI.

Response to Comment No.10

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Carroll N. & Arthur S. Pickoff
82429 Hwy 437
Covington, LA. 70435

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD. 20762-5157

May 29, 1996

RE: Colorado Airspace Initiative - Draft Environmental Impact Statement

Dear Sir:

As new property owners of land located in the Wet Mountains of Custer County, Colorado, we are greatly disturbed by the proposed expansion and changes by the Air National Guard as stated in the Draft Environmental Impact Statement (DEIS) as part of the Colorado Airspace Initiative. We go on record as opposing any and all MOA's and MTR's proposed over the valley between the Sangre de Christo's and the Wet Mountain ranges. 1

The DEIS has failed to adequately research and report factually the impact and detrimental effects to the people of this community, to the wildlife, and to the environment in general. In fact, the validity of the entire study must be questioned. For example, the results of the study area, Cheyenne Wells (plains area) cannot be generalized to mountainous areas such as Westcliffe and La Veta.

A research and review of the literature available on the effects of jet engine noise and specifically features of military low-altitude flying and health effects of aircraft noise was done. There is no way to sugar-coat the potential damage to the health and well being of our community nor to justify the potential noise-related health costs. It was very difficult to find noise related research specific to wilderness or rural areas - most was done in urban areas or around airports. Although the study areas are not alike, the physiological and psychological conclusions can be extrapolated and applied. If anything, one could hypothesize that the results of these studies would be greater if reproduced in a very rural setting. 2

In a study evaluating the effects of aircraft noise on the hearing and auditory function of children (Chen, T.J.; Chen, S.S.,1993), the influence of high-frequency aircraft noise was conducted. Auditory and brainstem auditory evoked potential detections were performed in all subjects (228 students). The results of audiometry testing indicated there was significantly worse hearing ability in the children exposed to aircraft noise located under flight paths. Additionally, this study concluded that there was a" significant association between aircraft noise

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RESPONSES TO COMMENTS

Response to Comment No.1

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Response to Comment No.2

An additional discussion of human health effects has been added to Volume I of the EIS and can be found in new Subsection 4.13. This new subsection provides more information than previously given in the Draft EIS in Appendix G of Volume II.

exposure and the prevalence of noise-induced hearing loss." There was demonstrated damage to the cochlear organs of hearing.

Deafness is the most indisputable effect of noise on people. It is a known fact that a sudden noise impact of 140 dB can result in permanent deafness. If military training flights are to occur in our Valley region with decibel ranges of 110 to 120, what impact will that have to our hearing, not to mention the increased effect of echoing off the mountain ranges ? Permanent deafness does not have to occur just from a sudden high decibel noise impact. Gradual, but permanent, deafness can occur as a result of exposure to 85 dB sound-levels over several years (Bequette, F., 1994).

In a study of military low-altitude flight noise (Spreng, M., 1993), specific criteria for risk of damage was established based on physiological effects. The impact of sound was characterized by maximum levels up to 125 dB and accompanied by a rapid rise in sound pressure levels. The study was geared to determine how many overflight events could be regarded as tolerable and conclusions regarding physiological effects of low-altitude flight noise were also established. A risk assessment was derived which revealed that **"slight impairment to hearing is possible in low-altitude flight zones given either the recorded mean frequency of 17 direct overflights a day (with maximum levels over 100 dB) or else a few extreme isolated events."**(Spreng, M., 1993). This study also demonstrated short-term increases in heart rate were much greater in those subjects subjected to overflight noise than those provoked by other forms of environmental noise with comparable maximum decibel levels. The factors key to this study when applied to the areas impacted by the DEIS are several:

1. this study specifically evaluated military overflight aircraft noises;
2. the **mean frequency of overflights causing hearing impairment was 17 overflights/day** - well below the average overflights expected in the proposed DEIS;
3. a few extreme isolated overflights could produce similar impairments; and
4. not only hearing parameters were affected but cardiovascular changes occurred with increases in heart rates.

Other studies have also demonstrated the adverse effects to health when exposed to high level noise pollution. Although a study done by Regecova and Kellerova (1995) and reported in the Journal of Hypertension focused on urban noise pollution, their results were significant. Their study focused on the effects of medium and high level noise greater than 60 dB and the association between noise levels and blood pressure in preschool children. Not surprisingly, they found that children exposed to noise levels > 60 dB had higher mean systolic blood pressure (SBP) and higher diastolic blood pressure (DBP) measurements than children in quiet areas. Of the children studied (n = 1542), there was a higher incidence of children with blood pressure values above the 95th percentile. If the blood pressure of our

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children can be expected to rise above the 95th percentile from decibel levels of 60, what are we to expect when they are exposed to levels > 100 dB ? After all, the decibel level increase is not merely a numeric function of the difference of 40 dB between 60 dB and 100 dB, but is a logarithmic increase of hundreds of times louder. Do we now expect not only hearing loss but possibly strokes as a result of hypertensive crises? But deafness and hypertension are not the only physical and physiological insults to the human body as a result of noise pollution.

Hygge (1993), did a comparison study between the impact of noise from aircraft, road traffic, and trains on the long-term recall and recognition in children (12-14). Of the three noise types studied, all were of the equivalent level of 66 dB in each sub-group. **Noise impaired long-term recall with the average impairment due to aircraft and road traffic accounting for 23% of the scores.** Train noise had no effect.

Another study dealt with the acute effects of low-altitude flight noise and the relationship between noise parameters and specific physical reactions by individuals (Curio, I., Michalak, R., 1993). The noise parameters measured were maximum sound level and the sound level rise rate. Reactions to noise were studied on several levels including subjective experiences of negative effects, startle reactions, cardiovascular changes, and endocrine changes. Basically, it was determined that high sound level rise rates contributed to multiple physical symptoms cited by the study subjects. These included more pronounced myokinetic effects, hemodynamic changes associated with the startle reaction, increases in cardiac output leading to increases in blood pressure, and vasculamotor responses in the muscles. Most importantly this study demonstrated that in the elderly their regulatory mechanism to control blood pressure increases may be impaired and that as a consequence of the startle reaction, blood pressure increases of 45 mm Hg above a resting pressure may ensue. Additionally, subjects may develop a sensitization after repeated exposure to flight noises, **with the startle reaction intensifying or being triggered by LOWER sound levels.** There were also observed and measured increases in plasma hydrocortisone (associated with stress) and magnesium metabolism also characteristic of stress. Therefore, a correlation can be made linking acute physiological reactions to low-altitude flight noises and long-term health effects.

There has even been a study done which drew a correlation between increased mortality rates due to aircraft noise (Meecham, W.C., Shaw, N.A., 1993). The study utilized data over a ten year period from 1970-1980. Findings indicated a 5% increase in mortality rates due to increases in the numbers of fatal diseases for people near an airport. There was an 18% increase in cardiovascular deaths; suicides attributed to jet noises increased by 100%; accidental deaths increased by greater than 60%. These deaths were all attributed to aircraft noise in the high-noise level. Granted it could be argued that this study is

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not valid as it pertains to study groups living near an airport. However, the main criteria the study was clear upon was that these health related events were a result of exposure to high-level jet engine noise. We experience the sound level as pressure on our ears. If the audible threshold is zero dB, then 85 dB is the risk level, 90 dB the danger level and 120 dB the pain threshold (Bequette, F., 1994). The literature has already supported the fact that overflights of aircraft at 100 dB can cause negative health impacts. With overflights through the Valley and wilderness areas it could be concluded that the results of this study could apply to this community as well.

In a paper titled, "The State of the Environment", published in 1991 by the Organization of Economic Co-operation and Development (OECD), noise ranked among the foremost environmental problems in the industrialized developed countries. Noise was rated by the people to be the main local environmental problem - outrating in many instances air pollution and the quality of drinking water. How can the DEIS disregard an ambient noise level of 30 dB in some areas of the Valley to be assaulted by levels exceeding 120 dB and then try to apply FICON guidelines established for urban communities near airports ?

Shifting the scope from health related concerns to environmental issues - specifically air quality standards. Even our twelve year old daughter learned enough from her science fair project on acid rain to realize that engine exhausts contribute to the polluting from nitrogen oxides. Jet engine exhausts are not exempt. In fact, nitrogen oxides destroy an appreciable percentage of the stratospheric ozone. If a combustion chamber of a conventional jet engine is operated at the proper temperature and pressure needed for efficient flight, "it would emit 45 grams of NOx per kilogram of fuel consumed." (Rosen, R., Williams, L., 1993). In order to present little or no danger to the environment, this emission index would have to be reduced to 5 grams per kilogram or less. With the possibility of up to 40 sorties in a 24 hour period of time, what type of emission index would there be and how many grams of NOx per kilogram of fuel is consumed for each type of aircraft to be flown? Presently there is enough NOx released to deplete the ozone layer by 5 - 10 percent ! Is the Air National Guard prepared to add to that ?? 3

As some final reflections and comments to the DEIS, issue needs to be taken regarding the position of the ANG with respect to domestic animals. There are many ranchers and cattlemen still operating livestock businesses in the Wet Mountain Valley region. Part of the consideration and decision making process we went through in selecting this region to purchase property was, eventually upon retirement, to continue my hobby/small business of raising and breeding show quality registered quarter horses. Albeit a small operation, it is still one which has been financially successful and rewarding due to the quality of horse we have been fortunate to breed. There is a delicate balance mixed with a lot of luck to produce top quality animals. They are 4

Response to Comment No.3

The EIS evaluated aircraft air pollution resulting from each of the alternatives studied in the EIS using scientifically validated emissions modeling tools designed to predict ground-level pollutant concentrations. The total air pollution emissions from the 140 WG would be reduced under the Preferred Alternative and the Original Proposal as compared to existing conditions, because the total number of flying hours would be reduced from 5005 to 4600 hours. The cumulative air pollution concentrations, as determined through computer modeling for each of the airspace segments, could increase or decrease depending upon a variety of factors. These factors include the type of aircraft using the airspace, their altitude, frequency, power setting and meteorological conditions rather than a strict proportional relationship to the number of sorties flown. Nonetheless, under the worst case scenario modeled for each airspace segment under each of the alternatives, no air pollution concentrations resulting from aircraft operations would cause any local area to be out of compliance with Federal or state standards or make any significant impact on air quality in any area. Also, when comparing these air pollution concentrations with Federal and state limits for the Prevention of Significant Deterioration (PSD) in air quality, all levels were far below minimums.

Response to Comment No.4

It is possible that aircraft noise could startle domestic animals, especially young or penned animals, and cause them to injure themselves. However, animals adapt and habituate to various sound sources, including jet aircraft noise. Because the airspaces associated with the CAI are mostly existing airspace that have been utilized for over 25 years, this adaptation and habituation to jet aircraft noise has likely already occurred.

not four legged humans to which human behavior and values can be placed. Nor can you compare a bison herd to a hereford herd of cattle to a herd of horses. The only similarity they have is that they are "herding" animals and will react generally to rules of a herd. With that said, I too had to question the objectivity and expertise of the crew which conducted the bison study. I also had to question why the Colorado Horsemen's Council's concerns and opposition were not addressed. I could tell you exactly what would happen with my horses if jet overflights were to occur over my property. I don't want to think about the possible effects such overflights could have on my broodmares foaling. The literature has already supported the negative physiological effects of sudden impact noise on humans. The only other statement you can validate other than bison, cattle, and horses being "herding" animals, is that they, too, will have a physiological negative reaction to sudden loud noises. 5

Finally, our family purchased our Colorado property primarily for the love of the area, the pure, pristine, "Back to Nature" feel with the dream of building a summer home which would eventually be our "Golden Pond" retirement. Beyond our life was the dream to give this beauty to our daughter some day. The Air National Guard wants to destroy our dream, the dream for our daughter's future, and the dreams and lives of the people of that beautiful valley and of those yet to enjoy that way of life. Surely there must be alternatives which still can meet the ANG's needs without destroying that which they have pledged to protect! Do not further destroy what few precious natural resources and virtual beauty this Earth has left by cluttering our airspaces with jet planes and bombarding our sound waves with deafening decibels. 6

Respectfully submitted,

Carroll N. Pickoff

Arthur S. Pickoff

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RESPONSES TO COMMENTS

Response to Comment No.5

The "Bison Study" presented in Appendix J was intended simply to observe the reactions of the bison to low-altitude F-16 overflights and to determine if a herd stampede was likely to occur. This observational study was accomplished at the request of certain members of the Citizen's Working Group. Members of this Working Group were invited to participate in the observations. In addition, several media representatives were present to observe the overflights. The observational study was never intended to evaluate other behavioral or physiological reactions of bison to aircraft overflights. The EIS authors relied on other existing published studies based on more detailed scientific methodologies to provide information on various other behavioral or physiological reactions of animals to aircraft noise.

Response to Comment No.6

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

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May 29, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchett Ave.
Andrews AFB, MD 20762-5157

To Whom It May Concern:

As a landowner in Custer County, Colorado, this is to protest vigorously the proposed Airburst MOA, the La Veta MOA , and all MTRs leading to the Airburst Range. My great-grandfather homesteaded in Custer County in 1869, and I have had close ties to this area all my life, although at the moment my primary residence is in Reno, NV. I plan to retire to Custer County. The way of life in the Wet Mountain Valley will be ruined by the planned overflights. 1

If the Colorado Air Guard needs space to practice, we have plenty of very arid land devoid of objectors here in the State of Nevada. There is a great contrast between areas out here such as the Fallon Naval Air Station, Nellis Air Force Base, and the Nevada test site. There could not be a greater contrast between the character of these areas and the Wet Mountain Valley, which will be ruined by the proposed overflights. 2, 3

Sincerely yours,

David A. Schooley

David A. Schooley
10 Irving Park Circle
Reno, NV 89503

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RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

The use of other training areas was examined as part of the development of the alternatives studied in detail in the EIS in Subsection 2.3. The proposal was designed to minimize conflicts with potentially sensitive areas while providing the training resources necessary to meet military readiness requirements. Specific narrowing criteria for the selection of military training airspace (see Subsection 2.3.3 in Volume I) were used to evaluate other locations, and no alternative training areas were identified that could be substituted for the airspace configuration proposed in the alternatives studied in the EIS.

The primary user of the airspace included in the Colorado Airspace Initiative is the 140 WG based at Buckley Air National Guard Base in Aurora, Colorado. Because of limited resources and aeronautical constraints, virtually all of our nation's fighter units train in airspace that is within a "tank of gas" of the aircrews' base.

Response to Comment No.3

The Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

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RALPH B STANGL
JANE Z STANGL
246 COUNTY ROAD 327
WESTCLIFFE CO. 81252-0690

May 29, 1996

PROGRAM MANAGER CAI EIS
ENVIRONMENTAL DIVISION
AIR NATIONAL GUARD
READINESS CENTER/CEVP
3500 FETCHET AVE
ANDREWS AIR FORCE BASE, MD, 20762-5157

SUBJECT: COLORADO AEROSPACE INITIATIVE

The documentation for the subject Guard project appears to be an after fact sales approach for a directed decision. It favors "BUZZ" words and references not discussed, such as USAF AIRSPACE MASTER PLAN, NATIONAL AIRSPACE SYSTEM, OTHER DEPARTMENT OF DEFENSE UNITS, SPECIAL MILITARY OPERATIONS AND OTHERS. The references are not laws, therefore must be regulations, guides or opinions, readily subject to various interpretations and change.

The technical inputs certainly could use more data. It appears as if aircraft operational and performance data was not used by the documenters. There appears to be a absence of low altitude automatic and or manual flight profiles, along with thrust variation and maneuvering "g" levels, which certainly could be a critical elements in a analysis. Did not find the discussion of operations in the documentation for subject as they relate to potential actual combat scenarios. The noise level analysis do not seem like those used by the Air Force in Azus studies reviewed a few years back. 1

It appears some relief for reference criteria could come through modification of operations at Denver. Casual observation indicates restrictions and traffic there, are more liberal than at Dallas-Fort Worth. Ohara, Atlanta and other locations.

The impacts on people, wildlife, and other environmental considerations seem to be glossed over. Hazardous material release is an example. The use of hydrazine in the F16 and the use of volitales on other aircraft are not discussed in detail.. 2, 3, 4

It would seem as if something other than the " We want to fly objective" could be used to evaluate the impacts.

In summary it appears the Impact Statement is very sensitive to the Guard bias and generalities but insensitive to cultural, people, wildlife, environmental, economic and proper analysis. Therefore the citizen inputs should be utilized . 5

Sincerely

Ralph Stangl
Jane

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

An additional discussion of human health effects has been added to Volume I of the EIS and can be found in new Subsection 4.13. This new subsection provides more information than previously given in the Draft EIS in Appendix G of Volume II.

Response to Comment No.3

Studies conducted on wildlife have shown that numerous wildlife species have the ability to adapt to the presence of man and various man-made sound sources, including jet aircraft noise. While the noise generated from low-altitude military overflights may be initially startling, habituation to jet aircraft noise occurs with most wildlife species. Species-specific responses to low-altitude overflights vary considerably, and responses from individual animals may have the potential to cause injury. However, wildlife populations are usually affected only when a variety of factors work in combination to impact them, including declines or fluctuations in the availability of a food source, habitat destruction or alteration, predation, hunting, trapping, poaching, disease, or inclement weather, rather than noise alone. Normally, it would be unrealistic to predict or attribute any wildlife population declines to a single stressor, such as noise. In addition, no published scientific evidence was identified that indicated harm may occur to wildlife as a result of exposure to the levels of noise generated by military aircraft that would utilize the airspace associated with the Colorado Airspace Initiative.

Response to Comment No.4

The use of hydrazine and other hazardous materials associated with military aircraft operations is discussed in detail in EIS Section 3.1.12.

Response to Comment No.5

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

May 30, 1996

Air National Guard Readiness Center
Program Manager
CAI EIS, ANGRC/CEVP
3500 Fetchet Ave.
Andrews Air Force Base, MD 20762-5157

To Whom It May Concern:

I would like to enter this letter in the record of responses to the Draft Environmental Impact Statement for the Colorado Airspace Initiative. My name is Darrell Arnold. My address is P.O. Box 126, La Veta, Colorado, 81055. My telephone number is 719-742-5250. I have a bachelor of science degree in Wildlife Biology from Colorado State University. I am owner, publisher, and editor of a quarterly publication titled COWBOY MAGAZINE.

The Draft Environmental Impact Statement completely disregards the heart-felt and persistent opposition that Southern Colorado residents have to the proposed La Veta MOA and its associated MTRs. In fact, these objections are barely acknowledged at all in the Draft EIS. Despite many public meetings and despite numerous telephone calls and written objections to the proposal, the Air National Guard has dismissed this opposition out of hand and declared that these military operations will have "no significant impact." 1

Such a conclusion is a lie. There will be serious impact--so much impact that the activity of the aircraft will destroy the tranquility of Southern Colorado and absolutely ruin the lifestyles of the people who live here. If we Southern Colorado residents wanted to be oppressed by high levels of jet noise, we would all move to the Denver suburbs and live next to Buckley Air Base. Southern Colorado is not an uninhabited desert. Hundreds of thousands of people will be affected. 2

One of the primary reasons most of us live in the remote rural areas of Southern Colorado is because it is quiet and peaceful here. We listen to and enjoy the sounds of nature rather than the offensive sounds created by urban mankind. The level of intrusion these jet noises will create will be so high that few of us will want to live here anymore. Further, the many people who are fleeing urban areas to relocate in Southern Colorado and enjoy the peaceful life will find they have thrown away their lives' savings on homes in an area that is no longer desirable. 3

These MTRs and MOAs will completely ruin the aesthetic quality of life in Southern Colorado and will help to destroy the economy of the region by driving existing residents out and by preventing potential residents and businesses from wanting to locate here.

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RESPONSES TO COMMENTS

Response to Comment No.1

Because of the many avenues through which the public has received information on the CAI, including both factual and nonfactual information from various sources, some confusion may exist about the existing airspace and proposed new airspace, particularly for the Wet Mountain Valley and the San Luis Valley. The La Veta MOA is an existing airspace. No changes are proposed for this airspace.

VR-413 is also an existing airspace; however, under the Preferred Alternative, its width would be reduced in size and its eastern boundary moved away from the Sangre de Cristo Mountains. The minimum altitude would be raised from surface level to 500 feet above ground level. VR-412, which is currently a low-altitude route through the Wet Mountain Valley, would be eliminated altogether under the Preferred Alternative, thus eliminating low-altitude training completely from the Wet Mountain Valley. Sorties over the Wet Mountain Valley also are reduced under the Preferred Alternative.

Response to Comment No.2

Many citizens have expressed concern that their quality of life, which is based directly on the kind of lifestyle that they can enjoy while residing in or visiting the State of Colorado, will be changed by implementation of the CAI. The U.S. Air Force, including the ANG, has been conducting military aircraft operations in the Wet Mountain Valley and the San Luis Valley areas where people are most concerned for approximately 25 years. Most of the military airspace proposed under any of the alternatives is currently in use. Commercial aircraft overflights have also been taking place and will continue to do so. Citizens may notice changes in military aircraft overflights in certain areas associated with the CAI. The number of sorties are proposed to increase moderately in portions of the study area and decrease in others. Overall sorties will be reduced from 5,441 to 4,909 under the Preferred Alternative. The bottom altitudes of several airspaces where citizens are most concerned have been raised to reduce noise levels. Therefore, existing quality of life should not be changed.

Another economic consideration is the tourist industry. Every year, hundreds of thousands of people visit Southern Colorado in an effort to find rest and relaxation in our tranquil mountain environment. And those tourists pour millions of dollars into our economy. If the pleasures of communing with nature are destroyed by the obnoxious noise of low-flying jets, those tourists will find somewhere else to go. A major industry in Southern Colorado will be eliminated. 4

Often, when there is public opposition to some grand project, the promoters can argue that the area will benefit from the creation of new jobs and the spending of money in the area affected. But in this case, all the economic benefit will be in the Buckley Air Base area, around Aurora, Colo., and Denver, Colorado. There will be no economic benefit at all to southern Colorado, the area directly affected by the proposed flights. It is not fair to adversely affect one area of Colorado for the benefit of another. 5

At no time during the entire six years that this project has been proposed has the Colorado Air National Guard established why they *need* to train in Southern Colorado. We know they *want* to, but we have yet to learn why they *need* to. Further, they have not explained why alternate training areas have been dismissed as unacceptable. If there are good reasons for not training elsewhere, we'd like to know what they are. The Air National Guard has said that the new Denver International Airport has affected their use of the Kit Carson MOA, but, in actuality, they've only lost about 10 miles of their airspace. Surely that should make no difference, whatsoever, in their ability to train. 6 7 8

The Colorado Air National Guard has been unfair and dishonest in its conduct of the public comment process. One example is the registering of complaints on their hotline number, 1-800-582-8507. If I call that number and say, "There are F 16s flying over my home and they have been here for an hour and I strongly object to the noise they are making and the disruption they are causing my life," that phone call will not be registered as a complaint because I did not use either the word "complain" or "complaint." That is unethical and dishonest. 9

Along the same lines, it is unethical and dishonest to conduct scoping meetings in the areas affected and then to ignore the public comments when writing the Draft EIS. Those comments should all be part of the Draft EIS. 10

I object very strongly to the fact that the Colorado Air National Guard is spending my money and that of other citizens, in the form of our tax dollars, to make and present their ridiculous displays and movies. Those presentations are at the very least misleading and probably more accurately 11

RESPONSES TO COMMENTS

Response to Comment No.3

There would be some changes in sortie numbers, noise levels, and airspace dimensions under the Original Proposal and the Preferred Alternative addressed in the EIS. However, overall flying hours of the 140 WG will be reduced from 5005 hours to 4600 hours. When compared to existing military aircraft training in the study area, these changes would not change the current levels of solitude and peace and quiet experienced by residents. As under current conditions, noise from military aircraft operations may periodically disturb citizens and affect their enjoyment of solitude; however, opportunities for abundant periods of total peace and quiet would continue as under present conditions.

Response to Comment No.4

The role of tourism in the local economy, and its impact from the alternatives associated with the CAI, have been studied in the EIS as a part of the evaluation of socioeconomic impacts. There are a number of factors, other than aircraft operations, that may affect tourism and the use of recreational areas, including weather, the proximity of other attractions in the area, and the economy. While it is possible that a tourist visiting an area may find an aircraft overflight to be annoying, no significant change to the tourist industry would be expected considering the fact that the majority of the CAI airspace has existed for many years and the relevant influences from military aircraft operations are not changing in the study area. The contribution of tourism earnings to total industry earnings was presented in the EIS for each airspace. In all instances, these values were very consistent with overall state levels of tourism earnings as compared to industry earnings.

Response to Comment No.5

The operation of the 140 WG out of Buckley Air National Guard Base in Aurora has an obvious economic impact for the immediate surrounding communities. In 1994, the payroll for the Colorado Air National Guard personnel stationed at Buckley exceeded $34 million and local expenditures, primarily contracting and purchasing, were almost $22 million. The State of Colorado collects property taxes from the men and women who work at Buckley and live in the community, and collects sales tax dollars from all purchases made within the State by ANG members. These revenue sources are a part of the general funds for the State which are distributed on a yearly basis by the General Assembly to every county in the State.

out-and-out lies. There is no way that the Colorado Air National Guard is benefiting the natural environment in any manner whatsoever.

Further, the Air National Guard has used our tax dollars to provide their own employees with fat jobs that allow them to present their silly side-shows. And while they are sitting around, fat and happy, on our tax dollars, I am having to spend my own money to travel to meetings and pay for overnight lodging. I have also had to take time away from earning my own living to look at the Draft EIS and write my own comments about it.

Not one of the ANG people has had to spend a dime of his or her own money to work on this project. We are paying their salaries and picking up all their tabs. They should be working for us and not against us.

On top of all of that, they have wasted millions of our tax dollars on preparing this laughably inadequate Draft EIS. For example, ever since the 1960s, when the environmental movement really got started, there have been numerous studies showing the negative effects that stress has on the lives of people, livestock, and wildlife. They have shown that high levels of noise are a major source of stress. They have shown that stress can cause the health of people and animals to deteriorate, it can severely impact the natural reproduction of wildlife and the milk and meat production of cattle, and it can cause death in some species, such as Bighorn Sheep, which are found in abundance in the wilderness areas that will be affected by this jet traffic.

Many of these studies have been conducted in Colorado, by public and private institutions and by many of our colleges and universities, including Colorado State University at Fort Collins and the University of Colorado at Boulder. Yet, the Draft EIS makes no mention of these studies nor of the negative effects that high levels of noise can cause. I can get this information with a few telephone calls. You would think that the Air National Guard, with millions of our tax dollars to spend, could obtain the same information.

I object to the way the meetings have been conducted by the Air National Guard. They are supposed to be public-comment meetings and not ANG propaganda meetings. At the meeting at Alamosa, Colo., on the 14th of May, a document was handed out that informed people they would be allowed 10 minutes to speak, but before comments actually began, they were told to keep their comments to five minutes or less. That is clearly not enough time for anyone to adequately respond. Besides that, at Alamosa, the actual comment period was not from 5 o'clock to 10 o'clock as was advertised in the newspapers, but was only from 7 o'clock to 9 o'clock. The rest of the time was supposed to be used to look at the ANG displays. This is unfair and probably illegal. 12

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Response to Comment No.6

The Colorado Airspace Initiative is not an expansion of airspace, but rather a modification. In many cases, this modification actually results in a reduction of airspace and/or number of sorties flown. The need for the Colorado Airspace Initiative is presented in Subsection 1.3 of the EIS.

Response to Comment No.7

The use of other training areas was examined as part of the development of the alternatives studied in detail in the EIS in Subsection 2.3. The proposal was designed to minimize conflicts with potentially sensitive areas while providing the training resources necessary to meet military readiness requirements. Specific narrowing criteria for the selection of military training airspace (see Subsection 2.3.3 in Volume I) were used to evaluate other locations, and no alternative training areas were identified that could be substituted for the airspace configuration proposed in the alternatives studied in the EIS.

The primary user of the airspace included in the Colorado Airspace Initiative is the 140 WG based at Buckley Air National Guard Base in Aurora, Colorado. Because of limited resources and aeronautical constraints, virtually all of our nation's fighter units train in airspace that is within a "tank of gas" of the aircrews' base.

Response to Comment No.8

The opening of the Denver International Airport resulted in the loss of approximately 40 percent of the New Raymer MOA and air traffic control assigned airspace. The impact on the existing Kit Carson MOA, combined with changes proposed under the CAI Preferred Alternative, would result in an overall decrease in the total military training airspace available.

Response to Comment No.9

Since its inception, the toll-free number (800) 582-8507 has helped the ANG to monitor and reduce the number of aircraft noise complaints. All calls to the number are taken seriously regardless of how the caller characterizes the complaint. If callers are not satisfied with the 800-number service, experience future problems with the toll-free number, or feel they are not getting a timely response, an alternative is to call the 140 WG Commander at (303) 340-9555.

I feel that the Colorado Air National Guard has cheated this entire process every step of the way. They don't register complaint telephone calls unless you word them exactly right; they fill the Draft EIS with mountains of useless information, obviously inserted to confuse those who are trying to evaluate it; they leave out necessary documentation such as proof that there is "no significant impact" on people, livestock, and wildlife in the affected area; they don't allow enough time for people to study the Draft EIS and write an evaluation; they conduct their meetings in such a manner that they get more time to bury us in their obfuscation than we have to repudiate their false information; they often leave the room during these meetings so that our comments are heard only by ourselves and not by the ANG people who should be listening; they don't allow enough time for everyone to be heard fully; and they don't record your comments as being official unless your name, address, and telephone number are on the documents you present and unless you say, in writing, that you want your comments to be part of the record. 13

Further, they have conducted public meetings on days and at times when it is difficult for the average working person to attend them, and they have often refused to conduct meetings in locations which are directly affected by their proposed actions. 14

Not only is the Draft EIS for the Colorado Airspace Initiative inaccurate, inadequate, and incomplete, but the entire public comment process, as conducted by the Colorado Air National Guard, is at the very least unfair, and is more than likely entirely illegal. There will obviously be lawsuits filed as a direct result of the poor quality of this Draft EIS.

Sincerely,

Darrell Arnold
Publisher
COWBOY MAGAZINE
P.O. Box 126
La Veta, CO 81055
719-742-5250

Response to Comment No.10

All comments received during the scoping process associated with this EIS were considered in the preparation of the document. Such comments, as they relate to the proposal, have helped to improve the EIS process and have become a part of the administrative record for the proposal.

Response to Comment No.11

Studies conducted on wildlife have shown that numerous wildlife species have the ability to adapt to the presence of man and various man-made sound sources, including jet aircraft noise. While the noise generated from low-altitude military overflights may be initially startling, habituation to jet aircraft noise occurs with most wildlife species. Species-specific responses to low-altitude overflights vary considerably, and responses from individual animals may have the potential to cause injury. However, wildlife populations are usually affected only when a variety of factors work in combination to impact them, including declines or fluctuations in the availability of a food source, habitat destruction or alteration, predation, hunting, trapping, poaching, disease, or inclement weather, rather than noise alone. Normally, it would be unrealistic to predict or attribute any wildlife population declines to a single stressor, such as noise. In addition, no published scientific evidence was identified that indicated harm may occur to wildlife as a result of exposure to the levels of noise generated by military aircraft that would utilize the airspace associated with the Colorado Airspace Initiative.

Response to Comment No.12

In order to allow everyone an opportunity to comment at the public hearings, a time limit of 5 minutes was established for each individual oral comment. After everyone had spoken once, individuals were given an opportunity to speak again in additional rounds in case the initial 5 minute period had not been adequate for an individual to complete their comments. This was repeated until everyone had given all their comments. No oral comment sessions ended with commentors indicating they wished to give further comments.

Response to Comment No.13

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.14

The hearing locations were selected to ensure the inclusion of a wide geographic representation of potentially interested parties within the affected areas to ensure maximum participation. The availability of meeting rooms with the requisite facilities, that could be reserved on the dates required, also was a significant factor in the selection process. Input from the Citizens Working Group and its members was also considered. These factors were considered more significant than selecting a site primarily on the basis that it might be directly under an airspace.

The Colorado Mountain Club

710 10th St., #200 Golden, Colorado 80401

(303) 279-5643, Trip Sign-ups, 9-2 M-F; 7-9 p.m., M., T., Th.
(303) 279-3080, Business Calls Only, 9-5 M-F.
(303) 279-9690 Fax
1-800-633-4417 (business hours)

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Ave.
Andrews AFB, MD 20762-5157

May 30 1996

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Dear Program Manager,

The Colorado Mountain Club is Colorado's oldest and largest outdoor education and recreation organization. CMC has over 9,000 members, almost all of whom reside in the state of Colorado. Our members are frequent users of the public lands, above which the Air National Guard's proposal for airspace occupies. We are writing today with our comments on the Draft Environmental Impact Statement for the Colorado Airspace Initiative. Our major issues of concern about the DEIS are: 1) impacts to recreationists; 2) impacts to wildlife; 3) noise analysis.

Recreationists often use public lands, particularly wilderness areas, to find solitude and to escape the hectic pace of everyday life. Wilderness areas likely to be impacted by the CAI are the Sangre de Cristo and Greenhorn Mountain National Wilderness Areas. We feel that low flying aircraft would create a startle response in recreationists thereby diminishing their outdoor experience. We think that if this response was experienced often enough that visitation will drop if not cease altogether in these wilderness areas. If this were to happen, an argument could be raised by anti-wilderness advocates that existing wilderness areas are not being utilized, therefore there is no need to sanction new or expand existing wilderness areas. This argument could seriously jeopardize the preservation of biological diversity of our natural heritage areas. 1

The Colorado Division of Wildlife (CDOW) has identified several state and federal threatened and endangered species that may be impacted by the CAI. These species include: 1) bald eagle; 2) American peregrine falcon; 3) Mexican spotted owl; 4) least tern; 5) piping plover; 6) mountain plover; 7) whooping crane; 8) Eskimo curlew; 9) black tern; 10) ferruginous hawk (candidate); 11) northern goshawk (candidate); 12) Baird's sparrow (candidate); 13) western snowy plover (candidate); 14) loggerhead shrike (candidate); 15) white faced ibis (candidate); 16) western snowy plover (candidate); 17) greater prairie chicken; 18) lesser prairie chicken; 19) plains sharp-tailed grouse; 20) greater sandhill crane. Sensitive species that may be impacted include; elk, bighorn sheep; and antelope. The CDOW is concerned that the noise related "startle effect" resulting from low flying, extremely loud aircraft such as the F-16, will cause problems with one or more of the following occurring: 1) interruption of mating; 2) nest abandonment or abandonment of young; 3) spontaneous abortion; 4) loss of young or injury of adults during 2

RESPONSES TO COMMENTS

Response to Comment No.1

The ANG adheres to its "Policy on Air National Guard Overflights of Designated Wilderness and Wild and Scenic Rivers," as presented in Appendix L. This policy is intended to protect specifically identified areas, such as the Sangre de Cristo and Greenhorn Mountain Wilderness Areas, by limiting training operations to no lower than 2,000 feet above ground level whenever possible unless safety of the flight or operational parameters (e.g., weather conditions) may be compromised.

Response to Comment No.2

The ANG has been and will continue to work with the U.S. Fish and Wildlife Service, the Colorado Department of Natural Resources, the Bureau of Land Management, and other regulatory agencies to study the effects of their actions on threatened and endangered species within the areas affected by its operations. Representatives from these organizations meet periodically in a Coordination Group to discuss and study species of concern. Some ongoing study activities are currently funded by the ANG, including a study with the U.S. Forest Service on the Mexican Spotted Owl. The ANG will continue this cooperative effort and adjust its operations should any of these studies identify potential impacts on any threatened or endangered species.

escape response; 5) interruption of feeding with loss of prey, or lost feeding opportunity; 6) disposition to poor body condition and to secondary disease pathogens due to stress; 7) unnecessary expenditures of energy (because of flight response) during critical times of year; 8) death because of impact with aircraft (waterfowl during migration); 9) abandonment of chosen habitat in favor of those areas less impacted but less suitable. We echo the concern of the CDOW that in situations where threatened and endangered species are involved; any of these impacts may impede recovery efforts and result in a "taking" under Section 9 of the Endangered Species Act. In situations where species other than those listed as threatened or endangered are involved, impacts to populations as a whole are less threatening. However, sensitive species have great economic and aesthetic value and should be protected when possible to maintain optimal populations and recreational values.

Finally, we find Day-Night Averaging an erroneous noise analysis for the purposes of this DEIS. The level of 65 decibels as an average noise level above which is unacceptable is a standard developed by the Federal Interagency Committee on Noise (FICIN) to determine noise levels for communities next to commercial airports. Communities next to airports will naturally have a higher ambient noise level than a wilderness area or wildlife refuge. In some areas covered by the CAI the ambient noise level is only 30dB. If a jet suddenly flies over at 110dB, the average noise level, over a 24 hour period, has increased only a small amount, far below the day-night level of 65dB. However, this is not an accurate reflection of the impact of the noise level during the time the jet is overhead. 3, 4

To resolve these concerns and conflicts we request that the noise level by reanalyzed using a more appropriate technique. We also request that MRT's such as IR-413 be abandoned and certain airspace designated for MOA status be withdrawn, particularly those over wilderness areas and State Wildlife Areas. 5

Thank you for the opportunity to comment.

Sincerely,

Patti Biddle

Patti Biddle
Conservation Director

592

RESPONSES TO COMMENTS

Response to Comment No.3

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

211L Patti Biddle

Response to Comment No.4

The approach used in the EIS has been modified. The Federal Interagency Committee on Noise (FICON), representing a variety of Federal agencies with a mix of concerns associated with aircraft noise, reviewed aircraft noise analyses issues in 1992. This committee's report (FICON 1992) continued an approach to evaluating relative impacts associated with aircraft noise that has been recognized by noise analysis experts as the most widely endorsed and comprehensive approach to aircraft noise analysis available. This approach to noise analysis was incorporated into the analyses associated with the Draft EIS. In general, Federal land use compatibility criteria are derivatives of guidelines first devised for land near airports. All land use compatibility is based on the use of Day-Night Average Sound Level (abbreviated as DNL or Ldn) as the descriptor representing community noise environments. The criteria treat areas below DNL 65 dB as compatible for all uses, including residential, and they treat DNL 65 dB as a threshold for significant exposure. There is no generally accepted method for treating rural areas differently for these purposes.

However, many EIS reviewers, including some members of the Federal regulatory community, felt the application of the FICON standards, and the 65 dB threshold, to a rural setting was inappropriate for such areas with more quiet ambient noise conditions. Consequently, the use of the 65 dB threshold as the sole means to assess relative impacts or the acceptability of noise levels associated with aircraft operations addressed in the EIS has been modified and the analysis now includes additional information to evaluate potential impacts.

Response to Comment No.5

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

May 30, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

To Whom It May Concern,

I am a property owner in the Wet Mountain Valley. and I must vigorously protest the Colorado Airspace Initiative. Specifically, I do not want the Airburst MOA, the LaVeta MOA, and all the MTRs leading to the Airburst Range. The noise created by the jets that fly in these areas would change the valley to a great extent. It would no longer be the peaceful setting it is today. And the animal life would suffer. The noise on a regular basis would drive out the wildlife from the valley, and this is one of the most attractive things about the area. Additionally, there would be a much greater risk of fire, and this would decrease property values and increase insurance costs. But mostly, this beautiful valley would be changed for the worse because of the noise. 1, 2

The draft Environmental Impact Statement is very misleading, and is not a true evaluation of the noise impact to our community. Westcliffe, Colorado is not a major metropolitan area. It is a quiet, peaceful farm community. It is truly one of the most beautiful and unspoiled communities in the country. 3

Again, I am strongly against the CAI and I am asking that you eliminate the Airburst MOA, the LaVeta MOA, and all the MTRs leading to the Airburst Range. 4

Keith DuLac

Keith DuLac
8652 Hila
Derby, KS 67037

594

RESPONSES TO COMMENTS

Response to Comment No.1

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

Response to Comment No.2

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Response to Comment No.3

There would be some changes in sortie numbers, noise levels, and airspace dimensions under the Original Proposal and the Preferred Alternative addressed in the EIS. However, overall flying hours of the 140 WG will be reduced from 5005 hours to 4600 hours. When compared to existing military aircraft training in the study area, these changes would not change the current levels of solitude and peace and quiet experienced by residents. As under current conditions, noise from military aircraft operations may periodically disturb citizens and affect their enjoyment of solitude; however, opportunities for abundant periods of total peace and quiet would continue as under present conditions.

Response to Comment No.4

See response to Comment No. 1.

May 30, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

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Marcia R. DuLac

Marcia Ray DuLac
8652 Hila
Derby, KS 67037

595

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Response to Comment No.4

See response to Comment No. 1.

SHIPPED MAY 10 1996

TO: PROGRAM MANAGER, CAI EIS
ANGRC/CEVP
3500 FETCHET AVENUE
ANDREWS AFB, MD. 20762-5157

FROM: SCOTT ESTEP
942 HEISLER LANE
PUEBLO, CO. 81006

TO WHOM IT MAY CONCERN...

The recent summary of the Draft EIS Statement (DEIS) from the Air National Guard, has suggested that the presence and increase of training flights over the Sangre de Cristo and Wet Mountain ranges and valleys "does not appear to impact the area" is another example of deceitful, wasteful and unresponsive government run amok!

In the last thirty years of living and hiking in this region, I have experienced all too many of these training flights and can give a first hand "impact statement" ! Perhaps the incident at Little Sand Creek Lake will provide an example.

Little Sand Creek Lake has taken several attempts in my life to even find...it is very remote and takes hours of hiking and some imaginative trail scouting to even get to! It lies high in the wilderness of the Sangre de Cristo's and is in one of the most spectacular spots in the world. After finally finding this lake, I had settled into camp, some fishing and the incredible tranquility that a location like this will provide for those who choose to seek it...when over the ridge came the most unbelievable roar, followed by a brilliant flash! I dove for cover and lost my fishing pole in the lake...as I looked up at the military fighter roaring over my head, I could see the face of the pilot looking back...a face I'd like to see again and have a word with! The jet was a mere hundred feet or so above me and flying at incredible speed...the jets roar was very painful and my entire trip was ruined...three more flights came over during the next couple of days. If the experience had been so traumatic to me...what had it done to the wildlife living in the area...or people who moved to the region for peace and quiet...and why does man have to intrude upon even pristine wilderness as this...where motorized traffic is suppose to be illegal??? My complaints to the Colorado National Guard, who I was later told were training in the area, were ignored.

This is just one of the approx. 150+ training flights I have endured... and now you want to do more. Absolutely unbelievable and an outright crime!!! Just another example of decisions made by unaffected individuals in faraway places, living in cities where quality of life is a joke...one would wish for such intrusions at their homes or places of solitude...but they probably wouldn't notice...

Please find a better solution for training flights, than the mistake you are now considering...many options exist and will lessen the impact on humans and nature.

596

1

RESPONSES TO COMMENTS

Response to Comment No. 1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

May 30,1996

Program Manager, CAI EIF
ANGRC\CEVP
3500 Setchet Avenue
*Andrews AFB, MD 20762*5157*

This letter is sent to express my total disapproval of the new space required for the "MOA"!!! It doesn't surprise any of us who live where its QUIET to expect overpaid government commitee flunkies to realize they are about to spoil that and the well being of real life, wildlife and livestock. And really gentlemen-did it honestly take you 4 years and $1.5m to "fix" a report to say this NOISE would have NO SIGNIFCANT IMPACT??? You better check again the day/nite averaging and noise analysis-they are all way out of line and so are you!!!!!!

1

Most sincerely yours as a very concerned resident,

Marnie Flowers + Wm Falcon

Cuchara CO 81055

597

RESPONSES TO COMMENTS

Response to Comment No. 1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

May 30, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

To Whom It May Concern,

We purchased land near Westcliffe, Colorado so that we could build a house and retire in that beautiful valley. We fell in love with the area the moment we set eyes on it. It was so peaceful and full of God's natural beauty. And part of the attraction is that the area is still very quiet and "undiscovered". We even have hopes that the ski area that is being planned will not really make a go of it and attract a lot of vacationers and businesses. To us, this would spoil a lot of what we are trying to create in our retirement. We have worked hard for many years so that we can enjoy our retired life.

And this is exactly why I must vigorously protest the Colorado Airspace Initiative. Specifically, I do not want the Airburst MOA, the LaVeta MOA, and all the MTRs leading to the Airburst Range. The noise created by the jets that fly in these areas would change the valley to a great extent. It would no longer be the peaceful setting it is today. And I'm sure the animal life would suffer. The noise on a regular basis would drive out the wildlife from the valley, and this is one of the most attractive things about the area. 1 2 3

The draft Environmental Impact Statement is very misleading, and is not a true evaluation of the noise impact to our community. Westcliffe, Colorado is not a major metropolitan area. It is a quiet, peaceful farm community. It is truly one of the most beautiful and unspoiled communities in the country, and I have seen a lot of the country. 4

Again, I am strongly against the CAI and I am asking that you eliminate the Airburst MOA, the LaVeta MOA, and all the MTRs leading to the Airburst Range. 5

Jim Griffin
7618 Harlan
Wichita, KS 67212
(316) 942-6988

598

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

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Response to Comment No.3

Studies conducted on wildlife have shown that numerous wildlife species have the ability to adapt to the presence of man and various man-made sound sources, including jet aircraft noise. While the noise generated from low-altitude military overflights may be initially startling, habituation to jet aircraft noise occurs with most wildlife species. Species-specific responses to low-altitude overflights vary considerably, and responses from individual animals may have the potential to cause injury. However, wildlife populations are usually affected only when a variety of factors work in combination to impact them, including declines or fluctuations in the availability of a food source, habitat destruction or alteration, predation, hunting, trapping, poaching, disease, or inclement weather, rather than noise alone. Normally, it would be unrealistic to predict or attribute any wildlife population declines to a single stressor, such as noise. In addition, no published scientific evidence was identified that indicated harm may occur to wildlife as a result of exposure to the levels of noise generated by military aircraft that would utilize the airspace associated with the Colorado Airspace Initiative.

Response to Comment No.4

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.5

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

609

May 30, 1996

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ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

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Linda Griffin

Linda Griffin
1618 Harlan
Wichita, KS 67212
(316) 942-6988

RESPONSES TO COMMENTS

Response to Comment No.1

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May 30, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

Program Manager:

As I was unable to attend the scoping meeting in my area due to work constraints please consider and acknowledge this written response as my personal comment to be included in the record of the EIS for the Colorado Airspace Initiative.

First I must protest the time limitations that citizens were allowed physical possesion of the DEIS. To read, comprehend, analyse and prepare comment on such a complex document under these conditions is in the least unreasonable. The military has had, at a minimum, five years to prepare, edit, absorb and manipulate this document and to expect the citizen to prepare adequate commentary within this timeframe is simply not fair. Lt. Col. Steve Shiell told me personally that he had a copy of this DEIS on his desk at the pentagon almost two years before the public release. I do not believe this type of manipulation is in the spirit of NEPA. 1

However, even with the excessive time and taxpayer paid man-hour resources, the DEIS is obvious in its shortcomings of data, methodolgies, stategies, and purpose. The document never answers the primary concern of why the Colorado Air National requires so much more airspace per aircraft and crew than any other Air Guard Unit in service. 2 As far as data and methodologies go I will not be redundant to the majority of persons who did attend and give testimony at the recent round of scoping meetings voicing concern with the faulty noise analysis and conclusions contained in the DEIS. Suffice to say that, beyond manipulations, 130+ single event decibel occurances do in fact have *significant* impacts on wildlife, domestic animals, residents, and persons escaping to a wilderness area and the wilderness experience it is theoretically supposed to provide. A 2000 ft. AGL ANG advisement does not mitigate the shattered wilderness experience gutted of the solitude and serenity that this document and proposal authorizes. This type of disrespect for our quality of life resources only solidifies opposition to this prosposal. A prudent cost analysis would question whether the U.S. Air Force and the Air National Guard's stubborness and purposeful intent to discount legitimate citizen concerns, even if this faulty initiative somehow reaches final approval, will be a positive benefit to the agency in the long run. 3, 4 Beyond noise concerns this document has not adequately addressed safety concerns for residents on ground. 5 Where is the funds to develope a local emergency response team to aid residents in a catastrophic crash where our fire prone forests explode? I did not see where the DEIS addressed the impacts to our surface water resources from residuals of spent flares. I was personally assured, during a scoping 6

RESPONSES TO COMMENTS

Response to Comment No.1

The Council on Environmental Quality provides guidelines for the preparation of Environmental Impact Statements, and the review of EISs by the public and various government agencies. These guidelines direct agencies to "allow not less than 45 days for comments on draft statements" (Section 1506.10 of these guidelines). The comment period for the CAI Draft EIS officially opened March 29, 1996 with the Notice of Availability published in the Federal Register. The initial mailing of the statement to over 750 addressees was accomplished on March 20, 1996 prior to the NOA. The close of the comment period was initially published as June 5, 1996 (68 days), and then extended to July 12, 1996 (105 days).

Response to Comment No.2

ANG aircrews utilize varying airspaces to conduct training dependent upon their home or base location. In some instances, when compared to the 140 WG, more physical airspace is available. Conversely, in some instances, less is available. Airspace for training is dependent upon requirements, availability, and safety of flight for general and commercial aviation, and therefore would vary from location to location.

RESPONSES TO COMMENTS

Response to Comment No.3

The approach used in the EIS has been modified. The Federal Interagency Committee on Noise (FICON), representing a variety of Federal agencies with a mix of concerns associated with aircraft noise, reviewed aircraft noise analyses issues in 1992. This committee's report (FICON 1992) continued an approach to evaluating relative impacts associated with aircraft noise that has been recognized by noise analysis experts as the most widely endorsed and comprehensive approach to aircraft noise analysis available. This approach to noise analysis was incorporated into the analyses associated with the Draft EIS. In general, Federal land use compatibility criteria are derivatives of guidelines first devised for land near airports. All land use compatibility is based on the use of Day-Night Average Sound Level (abbreviated as DNL or Ldn) as the descriptor representing community noise environments. The criteria treat areas below DNL 65 dB as compatible for all uses, including residential, and they treat DNL 65 dB as a threshold for significant exposure. There is no generally accepted method for treating rural areas differently for these purposes.

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Response to Comment No.4

Many citizens have expressed concern that their quality of life, which is based directly on the kind of lifestyle that they can enjoy while residing in or visiting the State of Colorado, will be changed by implementation of the CAI. The U.S. Air Force, including the ANG, has been conducting military aircraft operations in the Wet Mountain Valley and the San Luis Valley areas where people are most concerned for approximately 25 years. Most of the military airspace proposed under any of the alternatives is currently in use. Commercial aircraft overflights have also been taking place and will continue to do so. Citizens may notice changes in military aircraft overflights in certain areas associated with the CAI. The number of sorties are proposed to increase moderately in portions of the study area and decrease in others. Overall sorties will be reduced from 5,441 to 4,909 under the Preferred Alternative. The bottom altitudes of several airspaces where citizens are most concerned have been raised to reduce noise levels. Therefore, existing quality of life should not be changed.

Response to Comment No.5

Initial response to an aircraft accident is the responsibility of the civilian authorities nearest the crash site, who would provide emergency services such as fire, police, and medical assistance, as necessary. It is the responsibility of the civilian unit responding to an aircraft accident to determine what response actions they are capable of performing, including the evaluation of proper personnel training and response equipment. If the responding unit is not capable of performing certain response actions, they should request assistance from the nearest civilian unit capable of performing the required response. In the event of an aircraft accident, the nearest USAF installation would be notified by these authorities. In most cases, the nearest USAF installation would have been previously notified by the USAF unit associated with the downed aircraft. Upon notification of the aircraft accident, the commanding officer of the nearest USAF installation dispatches a Disaster Response Force. The Disaster Response Force includes personnel who have been trained to respond to this type of occurrence, and would include disaster preparedness, security police, medical, fire department, legal, munitions, mortuary, and others as required. The Disaster Response Force would assist local response teams in matters of fire suppression, site security, medical treatment and evacuation, accident evaluation and investigation, retrieval of classified materials or equipment, and protective measures, such

as munitions disposal and hazardous/toxic materials protective measures. When necessary, the Disaster Response Force would coordinate activities with other regional response forces to ensure all personnel and equipment are obtained for proper mitigation and control of the accident site. It is the ANG policy to provide training, upon request, on aircraft accident emergency response to any recognized emergency response agency.

Response to Comment No.6

Water Resources are addressed in the EIS in Subsection 4.11.

Response to Comment No.7

The fire potential associated with aircraft overflights is generated from the potential for an aircraft crash or the use of flares in training. The EIS evaluated the potential for an aircraft crash resulting from the proposal. This evaluation determined that the likelihood of an aircraft crash would be very low. Therefore, the potential for a fire resulting from an aircraft crash would also be very low. In fact, military accidents have declined in the past decade, as described in the February 1996 report of the General Accounting Office, an organization under the U.S. Congress.

Authorized users of the airspace have proposed the continued use of flares in their training. However, the flares would not be released below 2,000 feet AGL. Once a flare is released, it ignites immediately. The burn time for a flare is approximately 4.0 to 4.5 seconds. In those 4.0 to 4.5 seconds, the flare falls approximately 500 feet. This leaves a safety margin of approximately 1,500 feet to allow for a flare that burns for more than 4.5 seconds to extinguish itself. The 140 WG has no knowledge of any fires being caused by flares released during current training missions by any aircraft utilizing Colorado Airspace Initiative airspace.

meeting in Rye, Colorado in the first round of meetings on this proposal by the military panel conducting the meeting, that a personal defense or illumination flare had never been the cause of a ground fire. I was greatly angered and solidified in my mistrust when I later obtained and read the Air Force's own *Special Neveda Report* that recounted several occurences of ground fires attributed to released flares. 7

Accumulation of certain data used in the DEIS was severely outdated during the unexplained delays between the annoucement of this proposal and the public release of the DEIS. According to census figures, Custer County is now the tenth fastest growing county in the country. Economic data used for the DEIS was faulty as well as the conclusions reached. Wildlife concerns are vaguely and inadequately dealt with in the DEIS. Nesting sites of threatened or endangered species, birthing areas for our elk, deer, and Rocky Mountain Big Horn Sheep is not specifically detailed to how these resources will be protected from what the current scientific evidence shows the negative impacts to be. The finding of " No Signfigant Impact" on virtually every point of contention is disheartening and angering. Maybe "no signifgant impact" to the pilot overflying some of the last pristine alpine vistas in the country. Maybe "no signifgant impact" to the Washington, D.C. political or pentagon military bureaucrat so far removed from rural lifestyles and quality of life issues. Maybe "no signifigant impact" to the greater Denver metro area where they realize the positive impacts and the influence that millions of dollars received from the bloated military expanse without paying any adverse environmental impacts from their bounty. We, in the effected areas, very much find this proposal having signifgant impacts to virtually all aspects of our lives. 8 9 10

Perhaps, in the Final EIS, I might request that the positive comments made in Aurora in support of this proposal during the recent scoping meeting be adequately linked to the direct financial "impacts" and self interest that community has and will continue to derive from the approval of this initiative and the continued utilization of Buckley AFB. 11

Thank you for this opportunity to include my perceptions and comments into the record of the EIS.

Sincerely,

Randall S. Woods
578 Drunk Horse Lane
Westcliffe, Colorado 81252

909

RESPONSES TO COMMENTS

Response to Comment No.8

Socioeconomic data for the CAI EIS were collected in 1993 and 1994 and provided by the following agencies: U.S. Department of Commerce U.S. Department of Labor, and Colorado Department of Local Affairs.

Response to Comment No.9

Studies conducted on wildlife have shown that numerous wildlife species have the ability to adapt to the presence of man and various man-made sound sources, including jet aircraft noise. While the noise generated from low-altitude military overflights may be initially startling, habituation to jet aircraft noise occurs with most wildlife species. Species-specific responses to low-altitude overflights vary considerably, and responses from individual animals may have the potential to cause injury. However, wildlife populations are usually affected only when a variety of stressors work in combination to impact the, including declines or fluctuations in the availability of a food source, habitat destruction or alteration, predation, hunting, trapping, poaching, disease, or inclement weather, rather than noise alone. Normally, it would be unrealistic to predict or attribute any wildlife population declines to a single stressor, such as noise. In addition, no published scientific evidence was identified that indicated harm may occur to wildlife as a result of exposure to the levels of noise generated by military aircraft that would utilize the airspace associated with the Colorado Airspace Initiative.

The location of most nesting and concentration sites for threatened and endangered species were not published in the EIS at the request of the U.S Fish and Wildlife Service and state wildlife agencies, including the Colorado Division of Wildlife, to prevent curious members of the public from intruding upon these areas. This is standard practice for EIS documentation addressing such species.

Response to Comment No.10

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

RESPONSES TO COMMENTS

Response to Comment No.11

The operation of the 140 WG out of Buckley Air National Guard Base in Aurora has an obvious economic impact for the immediate surrounding communities. In 1994, the payroll for the Colorado Air National Guard personnel stationed at Buckley exceeded $34 million and local expenditures, primarily contracting and purchasing, were almost $22 million. The State of Colorado collects property taxes from the men and women who work at Buckley and live in the community, and collects sales tax dollars from all purchases made within the State by ANG members. These revenue sources are a part of the general funds for the State which are distributed on a yearly basis by the General Assembly to every county in the State.

5/31

RE: Colorado Airspace Initative

Dear Sirs,

We would like to voice our OPPOSITION to your proposed Air National Guard Military Operations Areas and Military Training Routes. We still have too much money in the Military budget if we are making this many training flights.

We DO NOT want the valley disrupted by flight noise. I am a Registered Environmental Professional and I can tell you that your impact statement is scientifically flawed. The impact on the wildlife is significant. It will cause a drop in births and many other problems. We bought property in this valley after looking at many other areas. The pristine atmosphere of this valley was the deciding factor. YOU WILL RUIN THIS VALLEY WITH YOUR POLLUTION. We have enough polluted areas in this country - DON'T MAKE ONE MORE!!! 1, 2

608

Sincerely,

Jack D. Bales
Linda D Bales (REP5811)
111 Myers Lake Rd
Noblesville, In
46060

RESPONSES TO COMMENTS

Response to Comment No.1

Studies conducted on wildlife have shown that numerous wildlife species have the ability to adapt to the presence of man and various man-made sound sources, including jet aircraft noise. While the noise generated from low-altitude military overflights may be initially startling, habituation to jet aircraft noise occurs with most wildlife species. Species-specific responses to low-altitude overflights vary considerably, and responses from individual animals may have the potential to cause injury. However, wildlife populations are usually affected only when a variety of stressors work in combination to impact the, including declines or fluctuations in the availability of a food source, habitat destruction or alteration, predation, hunting, trapping, poaching, disease, or inclement weather, rather than noise alone. Normally, it would be unrealistic to predict or attribute any wildlife population declines to a single stressor, such as noise. In addition, no published scientific evidence was identified that indicated harm may occur to wildlife as a result of exposure to the levels of noise generated by military aircraft that would utilize the airspace associated with the Colorado Airspace Initiative.

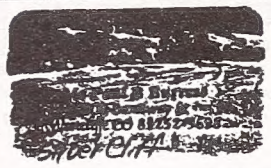
In addition, numerous studies have shown that military aircraft noise does not affect the birthing success of a variety of wildlife species.

Response to Comment No.2

Because of the many avenues through which the public has received information on the CAI, including both factual and nonfactual information from various sources, some confusion may exist about the existing airspace and proposed new airspace, particularly for the Wet Mountain Valley and the San Luis Valley. The La Veta MOA is an existing airspace. No changes are proposed for this airspace.

VR-413 is also an existing airspace; however, under the Preferred Alternative, its width would be reduced in size and its eastern boundary moved away from the Sangre de Cristo Mountains. The minimum altitude would be raised from surface level to 500 feet above ground level. VR-412, which is currently a low-altitude route through the Wet Mountain Valley, would be eliminated altogether under the Preferred Alternative, thus eliminating low-altitude training completely from the Wet Mountain Valley. Sorties over the Wet Mountain Valley also are reduced under the Preferred Alternative.

To: Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Ave
Andrews Air Force Base, MD 20762-5157

FROM: 

RE: The elimination of Airburst MOA, LA Veta MOA + all MTRs leading to the Airburst Range

Do not allow any more time, energy or resources to be wasted on this project.

the impact of sudden **loud** noise in a quiet natural setting is damaging to all life. 1

NO WAY MOA!

Sincerely yours,

Paul Burrese
604 Emerald Way
Silverthorne CO 81252

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RESPONSES TO COMMENTS

Response to Comment No.1

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

CONCERNED CITIZENS ABOUT AIRPORT NOISE, ENVIRONMENT, AND SAFETY
BOX 1486 . ELIZABETH . COLORADO . 80107

May 31, 1996

Program Manager, CAI EIS
ANGR/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

RE: Draft Environmental Impact Statement Colorado Airspace Initiative

Gentlemen,

This letter is in response to the DEIS issued by the Colorado Air National Guard. The CCAANES Organization is a citizen group formed for the purpose to mitigate the noise, safety, & environmental issues created by DIA in rural counties south of DIA. We are well versed with the effects of an inaccurate, flawed, and self serving EIS, as the one created by DIA. We have reviewed the comments made by the Custer County Action Association and there are several issues on which we agree.

1) As is the case with the EIS used for DIA, the models used in determining the noise impact to a rural area are not accurate. In rural areas, background noise can vary from 5db to 50db depending on the extent of farm animals, time of year (ie: harvest or planting), and the proximity to grain fields. These same readings taken in an urban setting can range from 30db to 75db. These readings do not take into account such activity as construction activities, mass transportation systems, or sirens which may range in excess of 90db. There is a substantial difference between rural and urban background noise. This difference is important due to the fact that background noise dampens or reduces the effect of overhead aircraft noise. Aircraft noise will sound louder in rural areas and we concur that 30 db penalties should be applied to the use of aircraft in rural areas. — 1

2) We agree that an EIS should not use the LDN as a means to measure the effects of noise. Research conducted by the School of Mines indicates that the LDN units are averaged four different times. LDN's are averages of Leq values. Each time the noise measurement is averaged, the magnitude of the noise event is reduced. The School of Mines illustrated that the standard sampling methods for Leq's and the equipment used by DIA and other airports vs more up to date sampling methods performed by the School, would increase the magnitude of noise events by 10db from those reported by DIA. It is obvious that the averaging techniques used by the noise models and by operating airports do not accurately reflect the noise events occurring in an area and that the information is intentionally calculated in a manner to reduce the magnitude of the noise event. Any conclusions drawn from using this information will only be inaccurate. — 2

3) We agree that Aurora and Denver are the only areas who economically benefit from the use of Buckley and DIA. The surrounding rural areas do not receive any economic incentives to endure the noise generated from these facilities. An EIS should accurately reflect the economic impacts that any change in the status quo would cause. These economic impacts should also take into account future growth and expansion. — 3

RESPONSES TO COMMENTS

Response to Comment No.1

The noise analysis methods used in the EIS are based on studies in a wide range of areas, and are applicable to rural as well as urban areas.

Response to Comment No.2

Ldn, by its definition, represents a single continuous average of the sound.

Response to Comment No.3

The operation of the 140 WG out of Buckley Air National Guard Base in Aurora has an obvious economic impact for the immediate surrounding communities. In 1994, the payroll for the Colorado Air National Guard personnel stationed at Buckley exceeded $34 million and local expenditures, primarily contracting and purchasing, were almost $22 million. The State of Colorado collects property taxes from the men and women who work at Buckley and live in the community, and collects sales tax dollars from all purchases made within the State by ANG members. These revenue sources are a part of the general funds for the State which are distributed on a yearly basis by the General Assembly to every county in the State.

Response to Comment No.4

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

4) We agree that land uses are determined by "local authorities" and should not be determined by federal bureaucies.

5) The Colorado Air National Guard should include in their DEIS any change is the status quo. This should include areas affected traveling from Buckley to the training area. The DEIS does not clearly indicate if flight paths, number of aircraft, or the type of aircraft will change.

4

The CCAANES Group concur with the findings of the Custer County Action Association. We believe that the DEIS is inaccurate, flawed, and self serving. We will encourage our State and Federal legislators to not support the findings of this DEIS.

Sincerely,

Dan Evango

CCAANES Board

c: Custer County Action Association

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612

May 31, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB. MD 20762-5157

Dear Program Manager,

We oppose using the Wet Mountain Valley as an MOA for the following reasons:

1. The adverse effects on the wildlife and our quality of human life.(The "averaging" technique used in the DEIS is invalid, both scientifically and rationally.)] 1

2. The risks of crashes and forest fires, events more probable when you consider recent civilian fatalities, and airborne "hot rodding", examples of which we have seen while horseback riding.] 2

3. Loss of property values.] 3

4. Destruction of our economy and quality of life.] 4

5 . Detrimental environmental effects and noise pollution like we have never heard, unless we've lived next to a major airport.] 5

It seems unreasonable and unnecessary to destroy this bucolic, serene valley, especially when, in getting to this place, we fly over miles and miles of desolate range which could be used for this kind of activity.

This is a beautiful and tranquil valley with grazing cattle, buffalo, and wildlife, and is best used left this way. We have chosen to live in this valley because it is a peaceful environment, and we meant to leave noise and congestion behind. Please consider another area for this training. .] 6

Thank you for your consideration.

Sincerely,

J. Kent and Jeanne T. Houston

c. Senator H. Brown
Senator B. Campbell
Custer County Action Assn.
Congressman S. McInnis
Governor R. Romer

RESPONSES TO COMMENTS

Response to Comment No.1

Studies conducted on wildlife have shown that numerous wildlife species have the ability to adapt to the presence of man and various man-made sound sources, including jet aircraft noise. While the noise generated from low-altitude military overflights may be initially startling, habituation to jet aircraft noise occurs with most wildlife species. Species-specific responses to low-altitude overflights vary considerably, and responses from individual animals may have the potential to cause injury. However, wildlife populations are usually affected only when a variety of factors work in combination to impact them, including declines or fluctuations in the availability of a food source, habitat destruction or alteration, predation, hunting, trapping, poaching, disease, or inclement weather, rather than noise alone. Normally, it would be unrealistic to predict or attribute any wildlife population declines to a single stressor, such as noise. In addition, no published scientific evidence was identified that indicated harm may occur to wildlife as a result of exposure to the levels of noise generated by military aircraft that would utilize the airspace associated with the Colorado Airspace Initiative.

Response to Comment No.2

Pilots must train for combat readiness; however, the Federal Aviation Administration and the USAF have strict rules to ensure pilots operate their aircraft in a safe manner. The rules govern minimum altitudes, maximum speeds, and type maneuvers that can be performed inside and outside designated training airspace. Any misconduct by a military pilot is a serious matter and commanders have the authority to suspend pilots who willfully violate flight rules or operate in an unsafe manner.

Response to Comment No.3

In order to address concerns regarding possible devaluation of real estate, the EIS evaluated historical data for property values. This analysis compares counties within the study area for the CAI, including those areas with currently utilized military airspace, to counties outside the study area. The results indicate that all counties experienced increases in property values. Further, in terms of median property values, counties within the study area for the CAI increased 99.71 percent compared to counties outside the study area, which increased 57.74 percent. Whereas a report published by the Federal Aviation Administration concludes "that noise has been shown to decrease the value of property by only a small amount--approximately 1 percent decrease per decibel (DNL)," this analysis applies to airport/airfield environments and not land areas underlying military training airspace. Therefore, although it is not possible to absolutely conclude that counties experiencing military aircraft overflights incur any greater change in real estate values than counties not experiencing similar overflight activity, it is not likely that real estate values would drop as a result of the CAI.

Response to Comment No.4

Many citizens have expressed concern that their quality of life, which is based directly on the kind of lifestyle that they can enjoy while residing in or visiting the State of Colorado, will be changed by implementation of the CAI. The U.S. Air Force, including the ANG, has been conducting military aircraft operations in the Wet Mountain Valley and the San Luis Valley areas where people are most concerned for approximately 25 years. Most of the military airspace proposed under any of the alternatives is currently in use. Commercial aircraft overflights have also been taking place and will continue to do so. Citizens may notice changes in military aircraft overflights in certain areas associated with the CAI. The number of sorties are proposed to increase moderately in portions of the study area and decrease in others. Overall sorties will be reduced from 5,441 to 4,909 under the Preferred Alternative. The bottom altitudes of several airspaces where citizens are most concerned have been raised to reduce noise levels. Therefore, existing quality of life should not be changed.

Response to Comment No.5

Noise from aircraft operations contributes to the overall noise burden on the environment generally referred to as "noise pollution." Military aircraft operations contribute to this burden. Widely accepted means to measure and judge the severity of "noise pollution" do not exist; however, the means to measure or model noise levels does exist. This EIS provides an evaluation of the noise levels associated with military aircraft operations. These levels, when combined with other sources of noise within the environment, contribute to "noise pollution."

Response to Comment No.6

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

615

Margaret Y. Kavookjian
4001 E. Beryl Ln.
Phoenix, AZ 85028

May 31, 1996

Program Manager, C.A.I. E.I.S.
ANGRC/CEVP
3500 Fetchet Ave.
Andrews A.F.B. MD 20762

Dear Sir,

I feel compelled to write to you concerning the Colorado Airspace Initiative. I am a homeowner in the Wet Mountain Valley and am in the process of moving to the area on a full time basis. I have followed this situation closely for the past several years and would like to voice my objections to not only the Airburst M.O.A. and the LaVeta M.O.A., but also to the manner in which this process is being handled. I found the D.E.I.S. to be an interesting study in deception. When I look at the science used in the noise study, it's hard not to assume that your attempts were to just wear down the readers into complacency.

It seems that the system of creating and proposing the C.A.I. has gotten overwhelmingly complicated to the point of preclusion of common sense in the decision making process. Several points seem clear to me:

1- The reduced number of sorties over the past few years have not adversely effected the quality of the A.N.G. [referring to the passing of the Operation Readiness Inspection] — 1

2- The need for low level training is questionable as the nature of warfare has changed and low level flights are becoming obsolete. — 2

3- The noise will definitely adversely effect the wildlife [I work as a wildlife rehabilitator and know this from experience] — 3

4- The noise can adversely effect the health of humans [despite the absence of any of the available studies to this effect] — 4

5- The noise will adversely effect property values — 5,

6- The noise will adversely effect the growing economic trend based on tourism — 6,

7- It seems ridiculous to even consider these areas so close to designated Wilderness — 7

I have always believed in and supported our military, but this process has discouraged my faith. I ask you to please draw on the qualities that I believe are, or

RESPONSES TO COMMENTS

Response to Comment No.1

The quality of ANG training is dependent upon location, mission requirements and availability of training areas, whether they be airspace or ground areas. Currently, the 140 WG has training areas available for all missions except adequate high altitude airspace for use in AMRAAM training.

Response to Comment No.2

Low-altitude flights allow pilots to learn to avoid detection and to survive in combat. Low-altitude flying provides a significant operational procedure through which detection can be minimized. Training is essential to acquire the skill to use this procedure. Specific combat conditions that allowed high-altitude operations in the Gulf War may not exist in future conflicts. The need for this training is required by Air Force training regulations.

Response to Comment No.3

Studies conducted on wildlife have shown that numerous wildlife species have the ability to adapt to the presence of man and various man-made sound sources, including jet aircraft noise. While the noise generated from low-altitude military overflights may be initially startling, habituation to jet aircraft noise occurs with most wildlife species. Species-specific responses to low-altitude overflights vary considerably, and responses from individual animals may have the potential to cause injury. However, wildlife populations are usually affected only when a variety of factors work in combination to impact them, including declines or fluctuations in the availability of a food source, habitat destruction or alteration, predation, hunting, trapping, poaching, disease, or inclement weather, rather than noise alone. Normally, it would be unrealistic to predict or attribute any wildlife population declines to a single stressor, such as noise. In addition, no published scientific evidence was identified that indicated harm may occur to wildlife as a result of exposure to the levels of noise generated by military aircraft that would utilize the airspace associated with the Colorado Airspace Initiative.

Response to Comment No.4

An additional discussion of human health effects has been added to Volume I of the EIS and can be found in new Subsection 4.13. This new subsection provides more information than previously given in the Draft EIS in Appendix G of Volume II.

were, the basic blocks of the military; honesty and integrity. Both of these qualities were severely compromised in the issuance of the D.E.I.S. Please look at this situation, realize how wrong this proposal is, and do what is right; eliminate the Airburst M.O.A. and the LaVeta M.O.A.

Sincerely,

Margaret Y. Kavookjian

Margaret Y. Kavookjian

cc: Custer County Action Assn.
Governor Roy Romer

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RESPONSES TO COMMENTS

Response to Comment No.5

In order to address concerns regarding possible devaluation of real estate, the EIS evaluated historical data for property values. This analysis compares counties within the study area for the CAI, including those areas with currently utilized military airspace, to counties outside the study area. The results indicate that all counties experienced increases in property values. Further, in terms of median property values, counties within the study area for the CAI increased 99.71 percent compared to counties outside the study area, which increased 57.74 percent. Whereas a report published by the Federal Aviation Administration concludes "that noise has been shown to decrease the value of property by only a small amount--approximately 1 percent decrease per decibel (DNL)," this analysis applies to airport/airfield environments and not land areas underlying military training airspace. Therefore, although it is not possible to absolutely conclude that counties experiencing military aircraft overflights incur any greater change in real estate values than counties not experiencing similar overflight activity, it is not likely that real estate values would drop as a result of the CAI.

Response to Comment No.6

The role of tourism in the local economy, and its impact from the alternatives associated with the CAI, have been studied in the EIS as a part of the evaluation of socioeconomic impacts. There are a number of factors, other than aircraft operations, that may affect tourism and the use of recreational areas, including weather, the proximity of other attractions in the area, and the economy. While it is possible that a tourist visiting an area may find an aircraft overflight to be annoying, no significant change to the tourist industry would be expected considering the fact that the majority of the CAI airspace has existed for many years and the relevant influences from military aircraft operations are not changing in the study area. The contribution of tourism earnings to total industry earnings was presented in the EIS for each airspace. In all instances, these values were very consistent with overall state levels of tourism earnings as compared to industry earnings.

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RESPONSES TO COMMENTS

Response to Comment No.7

The ANG adheres to its "Policy on Air National Guard Overflights of Designated Wilderness and Wild and Scenic Rivers," as presented in Appendix L. This policy is intended to protect specifically identified areas, such as the Sangre de Cristo and Greenhorn Mountain Wilderness Areas, by limiting training operations to no lower than 2,000 feet above ground level whenever possible unless safety of the flight or operational parameters (e.g., weather conditions) may be compromised.

618

David Nora
P.O. Box 299
Westcliffe, CO 81252

May 31, 1996

Program Manager, C.A.I. E.I.S.
ANGRC/CEVP
3500 Fetchet Ave.
Andrews AFB, MD 20762-5157

Dear Sir,

It's time that you looked at your D.E.I.S. concerning the Colorado Airspace Initiative, and realize that it fell very short of it's intended purpose. I am assuming that the overwhelming weight and poor science were not intentional. I would find it very depressing to think that our military would resort to underhanded actions that were meant to wear down those of us who object to the Airburst and LaVeta M.O.A.s. So I am assuming that you believe that you were doing a sufficient job of it. Well, it's time to admit that you missed your mark! -1

Not only was your noise evaluation based on flawed criteria, I find it hard to believe that you could possibly assume that the averaging out over several hours analysis could be valid in this situation. You did not do your homework when it came to the types of agricultural activities. You were using flawed information and therefore one can only imagine that your conclusions are flawed as well. -2

There were several issues brought up during the scoping meetings that were never addressed. When one looks at the entire D.E.I.S., it's hard not to assume that this document was intended as nothing other than a smokescreen. -3

If you push these M.O.A.s through using this document as a decision making tool, then I will find it very hard to trust the democratic process and will have lost faith in the military and it's ability to make informed decisions.

Please don't insult me and put out an E.I.S. of the same caliber as the D.E.I.S. -4

Yours truly,

David Nora

cc: Custer County Action Assoc.
Governor Roy Romer
Senator Hank Brown
Senator Ben Nighthorse Campbell
Congressman Scott McInnis

RESPONSES TO COMMENTS

Response to Comment No.1

The research completed to support the preparation of the CAI EIS follows the use of various accepted scientific methodologies used to analyze pertinent potential impacts. These analyses have been prepared by qualified scientists and engineers who perform these services for a variety of customers, including the ANG.

Response to Comment No.2

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

Response to Comment No.3

All comments received during the scoping process associated with this EIS were considered in the preparation of the document. Such comments, as they relate to the proposal, have helped to improve the EIS process and have become a part of the administrative record for the proposal.

Response to Comment No.4

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

619
223L David Nora

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2905 Bent Drive
Loveland, CO 80538
May 31, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

RE: Colorado Airspace Initiative - Draft Environmental Impact Statement

Dear Sir:

As a property owner of land near Westcliffe, Colorado for the last 23 years, I have been watching with interest the progress of the effort by the Air National Guard to establish the LaVeta MOA. Over the years we have observed military jet training flights over our property at levels at which we could see the pilot's face. We also see ridge level flights down the length of Sangre de Cristo mountains just to our west. 1

To suggest that the noise of these planes flying directly overhead at these levels does not negatively effect the quality of life in the valley is ridiculous. When one comes over it sounds like you are about to be bombed. 2

The Wet Mountain valley is possibly the last valley left in Colorado that has retained it's rural economic base and way of life. We have been very privileged to be able to use it for recreational purposes for the last 22 years without having to make a living there. Land developers are already encroaching on the valley threatening the economic system that makes it unique. To have the government also take actions that degrade the environment that make the area so attractive would be a real misuse of public money and trust. In terms of environmental impact, it makes more sense to fly jets at tree top level down the I-25 corridor. 3

I cannot believe that the military needs to train over land that has recently been declared wilderness area. Those on the ground recognize the value to retaining areas that are in a natural state, particularly because there are so few of them left. Wilderness designations prohibits the use of all motorized vehicles. Those in the air should also recognize this value. I cannot believe the Air National Guard will gain as much as they destroy if they start flying over the Wet Mountain Valley with the frequency they are requesting. 4

Sincerely,

Jane Nottberg

Jane Nottberg

RESPONSES TO COMMENTS

Response to Comment No.1

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Response to Comment No.2

Many citizens have expressed concern that their quality of life, which is based directly on the kind of lifestyle that they can enjoy while residing in or visiting the State of Colorado, will be changed by implementation of the CAI. The U.S. Air Force, including the ANG, has been conducting military aircraft operations in the Wet Mountain Valley and the San Luis Valley areas where people are most concerned for approximately 25 years. Most of the military airspace proposed under any of the alternatives is currently in use. Commercial aircraft overflights have also been taking place and will continue to do so. Citizens may notice changes in military aircraft overflights in certain areas associated with the CAI. The number of sorties are proposed to increase moderately in portions of the study area and decrease in others. Overall sorties will be reduced from 5,441 to 4,909 under the Preferred Alternative. The bottom altitudes of several airspaces where citizens are most concerned have been raised to reduce noise levels. Therefore, existing quality of life should not be changed.

Response to Comment No.3

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.4

The ANG adheres to its "Policy on Air National Guard Overflights of Designated Wilderness and Wild and Scenic Rivers," as presented in Appendix L. This policy is intended to protect specifically identified areas, such as the Sangre de Cristo and Greenhorn Mountain Wilderness Areas, by limiting training operations to no lower than 2,000 feet above ground level whenever possible unless safety of the flight or operational parameters (e.g., weather conditions) may be compromised.

Frank Kennicott Corporation
David A. Schooley, Secretary/Treasurer
PO Box 953
Westcliffe, CO 81252

May 31, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchett Ave.
Andrews AFB, MD 20762-5157

To Whom It May Concern:

As an officer of a family corporate landowner in Custer County, Colorado, we protest vehemently the proposed Airburst MOA, the La Veta MOA , and all MTRs leading to the Airburst Range. Frank Kennicott, great-grandfather of myself, my brother, and all cousins making up this corporation, homesteaded land in Custer County in 1869. Our sole source of income for this corporation will be ruined by the planned overflights in the Wet Mountain Valley. We now run about 220 cow-calf units (+five bulls) on this land. It is obvious that heavy overflights will frighten our cattle and endanger this way of life.

It is absolutely unconscionable that the military should endanger an area of overwhelming beauty, adjacent to the Sangre de Cristo wilderness area and its spectacular peaks, by destroying our freedom from noise pollution. We demand an end to these insane plans now!

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2
3

Sincerely yours,

David A. Schooley

David A. Schooley

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RESPONSES TO COMMENTS

Response to Comment No.1

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Response to Comment No.2

It is possible that aircraft noise could startle domestic animals, especially young or penned animals, and cause them to injure themselves. However, animals adapt and habituate to various sound sources, including jet aircraft noise. Because the airspaces associated with the CAI are mostly existing airspace that have been utilized for over 25 years, this adaptation and habituation to jet aircraft noise has likely already occurred.

Response to Comment No.3

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

May 1996

PLEASE do not allow our peaceful valley to become a low-flying zone for pilots in the Colorado Air National Guard or ony other defense department users from any other countries. There is a population base here and we do raise animals that are frightened by flights at 500 ft. We understand the need for training grounds for our defense- both our fathers were Air Force lifetimers and we are proud of our country. There are plenty of areas where there are not families with children living quiet lives- we do not want planes using our building for target practice (this used to be a regular occurance- ranchers here were discussing shooting them out of the sky if it continued- we can not afford our animals to be run into the ground by fearful reactions to low flying planes). Not only is it a threat to our livelihood but an unnerving occurence disturbing the retreats we host for people getting away from the noise of the city. Wilderness hikers,horseback riders,cattle ranchers,parents- all taxpayers who appreciate the freedoms of this nation- are adversely affected by the San Luis Valley being used as a training area. You must find another area in which to train- this is an area where the people you are training to protect LIVE THEIR LIVES !!! If we had chosen to purchase property next to an airstrip that would have been our choice- instead we are in a valley that is home to thousands of people who cherish the freedom of a quiet lifestyle.

1

2

Sincerely,

Wayatte A. Shook

W.A. Shook

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RESPONSES TO COMMENTS

Response to Comment No.1

Because of the many avenues through which the public has received information on the CAI, including both factual and nonfactual information from various sources, some confusion may exist about the existing airspace and proposed new airspace, particularly for the Wet Mountain Valley and the San Luis Valley. The La Veta MOA is an existing airspace. No changes are proposed for this airspace.

VR-413 is also an existing airspace; however, under the Preferred Alternative, its width would be reduced in size and its eastern boundary moved away from the Sangre de Cristo Mountains. The minimum altitude would be raised from surface level to 500 feet above ground level. VR-412, which is currently a low-altitude route through the Wet Mountain Valley, would be eliminated altogether under the Preferred Alternative, thus eliminating low-altitude training completely from the Wet Mountain Valley. Sorties over the Wet Mountain Valley also are reduced under the Preferred Alternative.

Response to Comment No.2

The use of other training areas was examined as part of the development of the alternatives studied in detail in the EIS in Subsection 2.3. The proposal was designed to minimize conflicts with potentially sensitive areas while providing the training resources necessary to meet military readiness requirements. Specific narrowing criteria for the selection of military training airspace (see Subsection 2.3.3 in Volume I) were used to evaluate other locations, and no alternative training areas were identified that could be substituted for the airspace configuration proposed in the alternatives studied in the EIS.

The primary user of the airspace included in the Colorado Airspace Initiative is the 140 WG based at Buckley Air National Guard Base in Aurora, Colorado. Because of limited resources and aeronautical constraints, virtually all of our nation's fighter units train in airspace that is within a "tank of gas" of the aircrews' base.

624

DENNIS SLIFER
7 SANDIA LANE
SANTA FE, NM 87505

Program Manager, CAI/EIS
Environmental Division
Air National Guard Readyness Center/CEVP
3500 Fetchet Ave
Andrews AFB, Md 20762-5157

Dear Sir:

I am writing to state my objection to the CAI/EIS and the proposal to increase air traffic of military jets over the Sangre de Christo and Wet Mountains of SE Colorado. I have enjoyed the serenity and tranquility of this beautiful area for years, and recently purchased land there for my retirement. I do not relish the prospect of my peaceful retirement being ruined by the incessant noise of low-flying jets screaming overhead. I am also concerned that the value of my property may be impacted if this proposal materializes. I am adamantly opposed to any expansion of such airspace. 1

Sincerely
Dennis Slifer

cc:
Congressman Bill Richardson

RESPONSES TO COMMENTS

Response to Comment No.1

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

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Michael Adams
Box 231
Eldorado Springs, CO 80025
June 1, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Ave.Andrews AFB, MD 20762-5157

I own property in section 19, T21S, R70W; in addition, I have been backpacking, camping, and hunting in the Wet Mountains and Sangre de Cristo since 1980, so I am definitely an effected interest with concerns about wildlife, quality of life, and property values.

I remember the terrible noise and intrusiveness of low-level overflights in the Wet Mountains and Sangres all through the 80s, with jet jockeys screaming at a few hundred feet up beautiful quiet alpine valleys. And I have stalked deer during bow season and had low flying transports come in at eye level and scare away the deer. So I have experienced personally the effects of low-level training flights. I was consequently appalled to find that the draft EIS stated there would be no significant impact from these flights. This is obviously a self-serving conclusion. It is apparent that the EIS process was completely dishonest and that the studies and methodology were manipulated to reach a particular conclusion. Particularly, I want to make the following points: 1

1)The day-night averaging is a ridiculous method for determining the impacts of noise. This is a very quiet area. Often the loudest sound I hear is the rustling of aspen leaves or the sound of my own breath. Even high-flying commercial jets are very obvious. One or two low-level training flights a day is extremely intrusive, obviously a "significant impact", and only a brazen liar or fool could state otherwise. 2

2)Your studies of the effects of the noise from low-level flights on wildlife are inadequate. We need to know much more about both the acute and chronic effects on nesting raptors, bears, lions, deer and elk, coyotes, and bighorn sheep. 3

3)You have not adequately addressed the impacts on property values. 4

4)You have not adequately addressed the need for these training flights. What are the national security implications of not using this area? Where have you been training the last three years? 5

5)The comment period is insufficient to fully read, digest, and comment upon such an extensive document. It should be at least 30 days longer. 6

I look forward to hearing your reply to these issues.

Thank you.

Sincerely,
Michael Adams

RESPONSES TO COMMENTS

Response to Comment No.1

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Response to Comment No.2

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

Response to Comment No.3

Studies conducted on wildlife have shown that numerous wildlife species have the ability to adapt to the presence of man and various man-made sound sources, including jet aircraft noise. While the noise generated from low-altitude military overflights may be initially startling, habituation to jet aircraft noise occurs with most wildlife species. Species-specific responses to low-altitude overflights vary considerably, and responses from individual animals may have the potential to cause injury. However, wildlife populations are usually affected only when a variety of factors work in combination to impact them, including declines or fluctuations in the availability of a food source, habitat destruction or alteration, predation, hunting, trapping, poaching, disease, or inclement weather, rather than noise alone. Normally, it would be unrealistic to predict or attribute any wildlife population declines to a single stressor, such as noise. In addition, no published scientific evidence was identified that indicated harm may occur to wildlife as a result of exposure to the levels of noise generated by military aircraft that would utilize the airspace associated with the Colorado Airspace Initiative.

Response to Comment No.4

In order to address concerns regarding possible devaluation of real estate, the EIS evaluated historical data for property values. This analysis compares counties within the study area for the CAI, including those areas with currently utilized military airspace, to counties outside the study area. The results indicate that all counties experienced increases in property values. Further, in terms of median property values, counties within the study area for the CAI increased 99.71 percent compared to counties outside the study area, which increased 57.74 percent. Whereas a report published by the Federal Aviation Administration concludes "that noise has been shown to decrease the value of property by only a small amount--approximately 1 percent decrease per decibel (DNL)," this analysis applies to airport/airfield environments and not land areas underlying military training airspace. Therefore, although it is not possible to absolutely conclude that counties experiencing military aircraft overflights incur any greater change in real estate values than counties not experiencing similar overflight activity, it is not likely that real estate values would drop as a result of the CAI.

Response to Comment No.5

The airspace modifications, deletions and creation (Two Buttes MOA), are in response to additional F-16 training requirements that change periodically, in this case, the addition of AMRAAM training. Also, the Colorado Airspace Initiative addresses requests from the Federal Aviation Administration to modify existing airspace (Kit Carson MOA) and allows the opportunity to re-evaluate existing airspace from an environmental perspective (eliminating VR-412, moving VR-413). The Colorado Airspace Initiative, in total, would allow the 140 WG and other users the opportunity to fully meet their training requirements as part of the Congressionally-directed Total Force Policy.

Response to Comment No.6

The Council on Environmental Quality provides guidelines for the preparation of Environmental Impact Statements, and the review of EISs by the public and various government agencies. These guidelines direct agencies to "allow not less than 45 days for comments on draft statements" (Section 1506.10 of these guidelines). The comment period for the CAI Draft EIS officially opened March 29, 1996 with the Notice of Availability published in the Federal Register. The initial mailing of the statement to over 750 addressees was accomplished on March 20, 1996 prior to the NOA. The close of the comment period was initially published as June 5, 1996 (68 days), and then extended to July 12, 1996 (105 days).

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Bob and Katy Grether
P.O. Box 433
Westcliffe, CO 81252
June 1, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

RE: Colorado Airspace Initiative -- Comments on Draft EIS

Dear Program Manager:

As Custer County property owners whose retirement home is in the La Veta MOA, we are particularly concerned about the noise factor and are not impressed with the analysis which averages decibels over a 24 hour period. We chose this location for our home because it is so quiet and undisturbed, and it is those very qualities that will be put in jeopardy with the intrusion of sudden aircraft sound. -1

We have a nesting pair of golden eagles on our property and have grave concerns about how sudden, severe noise will impact them and their offspring in the long run. -2

We note that in your original proposal (per Table S-6) you projected 0.6 daily noise events above 65 dB. In what you consider the "Preferred Alternative" in the EIS, there is an increase to 2.2 daily noise events above 65 dB. And this is after the Wet Mountain Valley community overwhelmingly expressed its opposition to the La Veta MOA at hearings, in writing and in person over the last several years. -3

Furthermore, your "Preferred Alternative" has a larger boundary than the original proposal. It would seem that the "Preferred Alternative" is preferred only by the Air National Guard.

RESPONSES TO COMMENTS

Response to Comment No.1

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

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While we understand the need for training, there are other mountain areas in the country with much lower wildlife, livestock and human populations that could serve the same purpose, although it may be less convenient for the Air National Guard. The Draft EIS does not justify the need of the La Veta MOA in today's changing conditions, nor does it identify adequate mitigations for the particularly damaging noise impacts. 4

This appears to be a clear instance in which the property owner serves government needs regardless of justification. The government has forgotten whom it was meant to serve. The cumulative impact of Defense Department cynicism toward the civilian population will be more harmful to the country in the long run than a reallocation of defense resources or a change in training procedures that would significantly reduce impacts. 5

Please reconsider your plan and eliminate the La Veta MOA.

Sincerely,

Katy Grether & Bob Grether

Bob and Katy Grether

cc: Colorado Governor Roy Romer
U.S. Senator Hank Brown
U.S. Senator Ben Nighthorse Campbell
U.S. Congressman Scott McInnis
Custer County Action Association

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RESPONSES TO COMMENTS

Response to Comment No.2

Studies conducted on wildlife have shown that numerous wildlife species have the ability to adapt to the presence of man and various man-made sound sources, including jet aircraft noise. Furthermore, the need for airports to continuously manage the occurrence of birds and other wildlife that move into the open field areas adjacent to airport runways demonstrates this fact. Aircraft sound impacts associated with the Colorado Airspace Initiative would be much less than that expected around airports.

Response to Comment No.3

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

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Response to Comment No.4

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Response to Comment No.5

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Bill Haynes
Box 101
Gardner, Co. 81040

June 1,1996

RE: Air National Guard Colorado Airspace Initiative

To Whom It Concerns:

This letter is to express my dismay at the contempt that the Colorado Air Nation Guard has displayed in the environmental Impact assessment process as displayed by their issuance of the Draft Environment Impact Statement (DEIS). I protest the fact that Huerfano County was excluded from the first round of 'scoping' meetings and after much complaint the ANG did have an information meeting was held in Gardner and close to 200 local citizens attended which shows a definite community concern. Our community was excluded from giving a response to the DEIS in spite of the fact that the ANG wants to use a great portion of Huerfano County for their low altitude training. Looking at the attendance records of the public meetings shows that the ANG choose the meeting sites where there was as little input from communities as possible for their second round of comments. They did bite the bullet and had a meeting in Westcliff which had a large attendance but was too far for many people in my community to attend. 1

As for the conclusion of the DEIS, a Finding Of No Significant Impact (FONSI) on every issue that was studied in itself provides a total lack of credibility in the document. To accept as fact that a low altitude MOA does not impact the environment is like saying that if you have a think you have a problem with me ripping you off you should just change your attitude which was actually suggested in the DEIS, the rapist telling the victim to enjoy it. I feel that the ANG has spent a huge amount of money to do a poor and transparent job at bending some data to fit their preconceived goal and ignored or glossed over any and all negative data to their plan including; safety, noise, socioeconomic, air quality, wildlife and degradation of the wilderness experience The ANG gives FONSI to all these issues and it doesn't take being a rocket scientist to see this as a whitewash. 2

I have written about the economic impacts of this proposal, they surely exist and they are all negative, but I want to explain the heart of my opposition to this plan.

In the "open house information meeting" in Gardner of 1994 the personal of the Air National Guard were quite available to express their pat responses full of MSL's (mean sea level) and AGL's (above ground level) MOA's and MTR's to the concerns of individual citizens one on one. They don't discuss "collateral damage" or last weeks crash of 2 F-16s in training. Their display graphics were very slick, although I don't believe that expensive color posters of cougars and mountain vistas does anything to preserve the natural splendor of this country, not withstanding their declarations that they are "sensitive to environmental concerns". The DEIS continues the same posture of the ANG, they know what is good and necessary and if you differ just change how you think, what you know. I know from my own experience what the MOA impact is and it is certainly not 3

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RESPONSES TO COMMENTS

Response to Comment No.1

The hearing locations were selected to ensure the inclusion of a wide geographic representation of potentially interested parties within the affected areas to ensure maximum participation. The availability of meeting rooms with the requisite facilities, that could be reserved on the dates required, also was a significant factor in the selection process. Input from the Citizens Working Group and its members was also considered. These factors were considered more significant than selecting a site primarily on the basis that it might be directly under an airspace.

Response to Comment No.2

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

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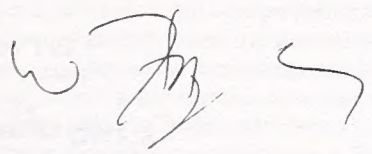
Response to Comment No.3

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

FONSI. The ANG says I should enjoy it because they are the Almighty military and they have the BOGUS DATA and conclusion to "prove it". If they were sensitive they would not be training in one of the few diminishing parts of our country that remains pristine and quiet, Upper Huerfano County was determined to be "profoundly quiet" in the DEIS. The roar of the f-16's and the rest of those fighters and bombers have no place booming and echoing in the mountains and valleys of Southern Colorado.

So I would ask the politician, the pilot or the policy expert if they worship in church and how they feel in the sanctity of their church. When I enter a Buddhist temple or Shinto shrine, a Catholic cathedral, a mosque, there is a tangible quality in all those places. That quality is part of what exists when you are in nature. Being here and going outside, going on a walk is for me like being in church. People who hike in the mountains are having communion with nature which is as close to God as I can think to be, the wild animals that live here are at one with creation. Now it seems to me if that if you were in your church with your wife or husband, the children all squeaky clean, dressed in their finest and a couple of bikers riding a pair of Harleys rode down the aisle and spun a wheely around the alter then roared off leaving a cloud of greasy smoke then you can understand what it feels like to live here when those jets are training.

Please use your influence to stop the La Veta MOA. Thank You.



June 1, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD
20762-5157

Dear Sirs:

This is a letter to address the health concerns that would be placed on the residents living in any area where military flights are permitted, even in sparsely populated areas. Although the National Guard followed proper procedure in acquiring the $1.5 million taxpaper funded Draft Environmental Impact Statement (DEIS) they failed to adequately look at the long term effects on human health. There is a significant difference between high intensity impulse noise and continuous or non-impulse noise on the health of humans. The latter can be evaluated by time-weighted averages in determining the risk for hearing loss for the average population, the former cannot.

A medical literature search on the human health effects produced by low level military flight provides ample evidence that these flights indeed can produce ill health. These range from annoyance factors to physiologic and psychological disturbances and some cases of permanent hearing loss. The outcome measurements of these exposures require long term observation and sophisticated analysis to allow statistically significant conclusions. 1

Included in the observations on populations that have had exposure to low level military flights are:

1. An increase in the number of adults requiring admission to psychiatric hospitals.[1]
2. Decreased scholastic achievement by low aptitude and middle aptitude students.
3. An increase in the number of female infants who were pre term and of low birth weight.
4. An increased prevalence of hypertension.
5. Increase in annoyance in school children with below norma hearing.
6. General increase in mortality rates.
7. Increase in cardiovascular deaths.
8. Increase in plasma cortisol and changes in magnesium metabolism.

An intriguing comparison in drug purchases was made between two villages in Labrador, one adjacent to a new runway construction and the other being maintained in its original quiet state. The purchase of hypnotics and sedatives increased markedly in the village adjacent to the airport. It decreased some when night flights were curtailed but not to the preflight level. Prescriptions for antacids and cardiovascular drugs gradually doubled without decreasing after the curtailment of the flights.[2]

63 4

RESPONSES TO COMMENTS

Response to Comment No.1

An additional discussion of human health effects has been added to Volume I of the EIS and can be found in new Subsection 4.13. This new subsection provides more information than previously given in the Draft EIS in Appendix G of Volume II.

229L John H. Ippensen

Of particular concern were some of the observations of children exposed to low level flights. These included acute terror and panic in children, screaming or freezing in infants and palpitations, shaking and dizziness in older children, increased sleep disturbance, bedwetting, nail biting, nervousness and slowed motor function were also observed. The urine cortisol level (the chemical associated with stress) in kindergarten children previously exposed to low-level flights was affected not only by a simulated overflight but also by the child's being told that such a flight was eminent but did not occur.[2] Urine adrenalin and noradrenalin levels (the fight or flight chemical) show a significant increase with noise exposure.[3]

The characteristics of low-level flight sound pressures that produce ill effects have been quantified. Sound levels above 115db, a steep slope of amplitude increase, sound from overhead, irregular occurrence of sound, lack of control of the timing or the volume of the sound are all characteristic of events that pose health hazards and also are the characteristics of low-level flights.[4,5,6,7,8,9]

Experimental animal studies in rats exposed to simulated military low altitude flights (MLAF) suggest that structural changes may have contributed to the increased blood pressure noted after the exposure i.e. a permanent change in the vascular system.[10] In histologic studies of the cochlea (inner ear) of guinea pigs following exposure to MLAF the structural damage to the inner ear hair cells were more severe and extensive than those produced by other types of noise exposures.[11] In airport employees, brainstem auditory evoked potentials (BEAPs) an electrophysiological measurement of hearing, indicates that the central auditory pathways as well as the cochlea demonstrate damage coinciding with the job exposure of the employee.[12]

In the evaluation of intellectual performance research shows that high levels of noise are particularly disruptive for dual-task procedures requiring attention sharing, and sequential responding, involving speed and accuracy.[13] In another study of seventh grade students noise exposure impaired long-term recall of difficult learning tasks.[14] Children with below normal hearing showed a higher likelihood of being aannoyed by aircraft noise.[15] This annoyance factor will necessarily come under the Americans with Disabilities Act (enacted July 26, 1990).[16] To quote:

> *Acoustical interference caused by inappropriate levels of background noise and reverberation presents a barrier to learning and communication in educational settings and school-sponsored extracurricular activities, particularly for students with hearing loss or other language/learning concerns.*

In a study of people that live near Los Angeles International Airport there was a 5% increase in mortality rates due to increases in a number of fatal diseases. There was a 18% increase in cardiovascular deaths, for people over age 75.[18]

1
continued

Additional studies have confirmed the increase in plasma hydrocortisone and changes in magnesium metabolism of a type characteristic of stress with exposure to MLAF noise.[18] In addition, the concept that habituation occurs after multiple MLAF noise exposures is refuted and indeed the opposite effect, i.e. a sensitization occurs that makeseach additional exposure even more damaging.[2,18]

It would appear that the National Guard would like us to think that it "cared enought to send their very best" by sending the DEIS report and hope the "weight" of the report would have an impact on the objections raised. However, the military has not been able to take care of its *own* in a limited and measurable effect of noise, i.e. hearing loss. Figures from the Military Audiology Association for fiscal year 1992 revealed that the total cost of hearing loss compensation for the Veteran's Administration (VA) was $230 million. The Navy Environmental Health Center has reported, via its Hearing Conservation Course Director instructional materials, that for fiscal years 1970 through 1990 the VA paid approximately $24 billion in hearing loss compensation.[19] The War Pensions Directorate admisisters claims for disability relating to service in the armed forces in war or peace. In 1993 they received 180,000 new claims, 80 per cent of which were for hearing loss.[20]

The U.S. Army has instituted a comprehensive hearing conservation program (HCP) over the past two decades and the Navy also has a HCP.[19,21] Both of the studies referenced indicate problems with individual noise exposure data, poor percentages of follow up audiometric testing, and and lack of concern in both officers and junior enlisted ranks of the implications of hearing loss caused by noise exposure.

Now if the very structured military cannot accumulate good data on their own personnel how can they have credibility in presenting studies that have even less control and measurable outcomes? If there is lack of concern for their own personnel on the impact of noise can we really think there is concern for the civilian population? Does the military want to open the liability isssue to non-military personel to add to the present $1 billion+ per year claims? In this age of fiscal restraint it would not seem to be a good choice.

It would appear that there is a growing body of evidence that noise in general and MLAF noise in particular is a public health problem. Failure to recognize this puts the civilian population and **particularily it's children and those with preexistant hearing loss at risk.**

Perhaps a good test for evaluating the MOA initiative would be to have the families of the military staff and decisions makers be relocated to areas in question so that a more direct imput would be forthcoming.

1 continued

Sincerely,
John H. Jorgensen M.D.

John H. Jorgensen M.D.
Otology-Diseases and Surgery of
the ear

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Program Manager CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD. 20762-5157

6-1-96

Dear Sir,

639

I would like to state my opposition to the proposed Colorado Airspace Initiative especially the Airburst MOA, La Veta Moa and all of the MTRs leading to the Airburst Range. 1

17,000 loud overflights per year is unacceptable!! As a property owner in the Westcliffe Co. area I cannot stand the thought of what should be a peaceful retirement, destroyed by the sound and other impact from military aircraft. 2, 3

This area is one of the great places on this earth That is exactly why we chose to build here.

The Draft Environmental Impact Statement is a slanted document in favor of the Initiative. One only needs to spend a peaceful night in this area to see that. Stop the madness!! 4

O. Jeffrey Smallwood Jr. Old Saltmarket 80275

RESPONSES TO COMMENTS

Response to Comment No.1

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

Response to Comment No.2

Under the Preferred Alternative, the maximum number of sorties for the Colorado Airspace Initiative would decrease from 5,441 sorties to 4,909 sorties per year.

Response to Comment No.3

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Response to Comment No.4

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

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3327 E. Geddes Drive
Littleton CO 80122
June 1, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

RE: Colorado Airspace Initiative
Draft Environmental Impact Statement

We are property owners in Custer County CO, west of the town of Westcliffe, and plan to build a retirement home and become permanent residents in the next few years. We are deeply concerned about the potential that military flights in the Colorado Airspace La Veta MOA will directly impact our enjoyment of our property and our property values. Adverse effects will include extreme noise pollution affecting humans, livestock, and wildlife. People will be affected inside and outside their homes, at all hours. In addition, the potential for crashes setting off forest fires is present. The terrain in the area is extremely mountainous and many areas are inaccessible in an emergency situation. 1 2

We object to the use of a noise standard designed for urban communities close to military and commercial airports. The standard of 65 decibels averaged over a twenty-four hour period is completely inappropriate. Acknowledgment of peak noise levels of around 110 decibels and comparison of this noise level to the ambient noise level around 30 decibels in the rural parts of Custer County reveals the extent of the potential problem. 3

The disturbance created by these flights would be extreme. Recently, we were driving through Denver on a warm Saturday in full city traffic with our car air conditioning on, all windows closed, and the stereo at medium to high volume. Suddenly a noise which obscured all the others startled us. It was created by a single military jet fighter overhead and lasted until the jet was out of sight. The prospect of daily repetitions of this event in our carefully chosen retirement site is appalling. 4

We respect the work of the Colorado Air National Guard. However, we are convinced that they can locate other training routes and locations which will not have such negative impact. We ask that the Airburst MOA, La Veta MOA, and all associated MTRs be eliminated from the Colorado Airspace Initiative plan. 5 6

Sincerely,
Douglas and Fran Jenner

cc: Governor Romer
Senators Brown and Campbell
Representative McInnis

RESPONSES TO COMMENTS

Response to Comment No.1

Noise from aircraft operations contributes to the overall noise burden on the environment generally referred to as "noise pollution." Military aircraft operations contribute to this burden. Widely accepted means to measure and judge the severity of "noise pollution" do not exist; however, the means to measure or model noise levels does exist. This EIS provides an evaluation of the noise levels associated with military aircraft operations. These levels, when combined with other sources of noise within the environment, contribute to "noise pollution."

Response to Comment No.2

The fire potential associated with aircraft overflights is generated from the potential for an aircraft crash or the use of flares in training. The EIS evaluated the potential for an aircraft crash resulting from the proposal. This evaluation determined that the likelihood of an aircraft crash would be very low. Therefore, the potential for a fire resulting from an aircraft crash would also be very low. In fact, military accidents have declined in the past decade, as described in the February 1996 report of the General Accounting Office, an organization under the U.S. Congress.

Authorized users of the airspace have proposed the continued use of flares in their training. However, the flares would not be released below 2,000 feet AGL. Once a flare is released, it ignites immediately. The burn time for a flare is approximately 4.0 to 4.5 seconds. In those 4.0 to 4.5 seconds, the flare falls approximately 500 feet. This leaves a safety margin of approximately 1,500 feet to allow for a flare that burns for more than 4.5 seconds to extinguish itself. The 140 WG has no knowledge of any fires being caused by flares released during current training missions by any aircraft utilizing Colorado Airspace Initiative airspace.

Response to Comment No.3

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

Response to Comment No.4

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.5

Whenever possible, the ANG tries to accomplish its training while flying over military or government-owned land. The Colorado ANG currently flies and trains over land belonging to the U.S. Army at Fort Carson and uses the Buckley Air National Guard Base. Military airspace also exists over lands owned by other Federal agencies, including lands administered by the Bureau of Land Management and the U.S. Forest Service. Completely eliminating flights over privately-owned lands and other selected areas, such as parks, however, would be impractical. Routes to link various training areas together are an essential part of the training airspace configuration and may be located over non-federally owned lands.

Response to Comment No.6

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

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June 1, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD. 20762-5157

RE: Colorado Airspace Initiative

To Whom It May Concern:

This letter is to notify you that the MOAs and MTRs planned for Custer, Fremont and Huerfano Counties in Colorado will not be tolerated by the property owners. The Air National Guard has used our tax dollars to produce an illegal and unjustifiable Draft Environmental Impact Statement that will be exposed in the most public manner possible. If the final EIS reflects the same ridiculous and inappropriate method of noise analysis and disregard for truth shown in the Draft, the explosion of resistance and whistle-blowing coming from our valley will make the 60 Minutes exposè of the tobacco industry look like child's play. Politicians will fall and the military will suffer mightily from the negative publicity. 1

We will never - repeat, **NEVER** stop fighting you over this injustice. This part of Colorado is one of the last quiet, natural wilderness areas left in the country and you will not be allowed to spoil it. The Colorado Airspace Initiative would destroy our environment, wildlife, property values and economy. You don't NEED our valley. We will accept nothing less than the total elimination of Airburst MOA, LaVeta MOA and all MTRs leading to the Airburst Range. 2 3

Make us proud of our government again. Do the right thing and find another place to train. You will have the total support of many overjoyed citizens behind you then, instead of a tidal wave of disbelief, distrust and hatred against you. 4

Linda & Calvin Leslie

Linda and Calvin Leslie
Property Owners
Custer County, Colorado

cc: Governor Roy Romer
Senator Hank Brown
Senator Ben Nighthorse Campbell
Congressman Scott McInnis
Custer County Action Association

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Response to Comment No.3

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

Response to Comment No.4

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

June 1, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

To Whom It May Concern:

644

As a Custer County landowner, I am outraged by the Colorado Airspace Initiative and its negative implications regarding the impact of sudden, loud noise in a quiet, natural setting. 1

The Cold War is over; let's try and cut the budget or use these kinds of defense appropriations to address pressing national problems. If you must practice, do it over the Great Sand Dunes National Monument, not over private property. I insist on the elimination of Airburst MOA, LaVeta MOA, and all MTRs leading to the Airburst range. 2 3

Alex D. Naylor

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

The use of other training areas was examined as part of the development of the alternatives studied in detail in the EIS in Subsection 2.3. The proposal was designed to minimize conflicts with potentially sensitive areas while providing the training resources necessary to meet military readiness requirements. Specific narrowing criteria for the selection of military training airspace (see Subsection 2.3.3 in Volume I) were used to evaluate other locations, and no alternative training areas were identified that could be substituted for the airspace configuration proposed in the alternatives studied in the EIS.

The primary user of the airspace included in the Colorado Airspace Initiative is the 140 WG based at Buckley Air National Guard Base in Aurora, Colorado. Because of limited resources and aeronautical constraints, virtually all of our nation's fighter units train in airspace that is within a "tank of gas" of the aircrews' base.

Response to Comment No.3

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

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Kristen Olson
5500 Highway 165
Wetmore, CO 81253

June 1, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

Dear Program Manager:

Ths purpose of this letter is to comment on the Colorado Air Initiative Draft EIS. Please include this comment in the Final EIS.

I am opposed to the CAI. Further, the Draft EIS is a sham. Specifically, the day-night averaging used to analyze the noise impact clearly is an attempt to cover up the actual noise impact that would occur should the CAI be approved. The fact that this may be a "standard" analysis is irrelevant, given the low ambient noise levels in the Wet Mountains and the Wet Mountain Valley. The day-night averaging masks the impact on both the people and the animals -- both domestic and wild -- living in the area. The averaging over 24-hours of the 110 decibels of noise associated with a jet overflight does not alter the fright and resulting detrimental physical impact of the sudden, extremely loud noise on humans and animals. 1

The fact that the Draft EIS uses 65 decibels as an acceptable average noise level over a 24-hour period while the document admits this standard is used for communities located next to airports is, in a word, unbelievable. The noise impact studies are a complete and total farce. Clearly, the intent of the authors of the Draft EIS was to reach a conclusion of a Finding of No Significant Impact, and the studies were taylored to support that conclusion. 2

I almost didn't bother to write this comment. Having reviewed the Draft EIS, a piece of propaganda artfully crafted without regard for the truth, I couldn't help but feel that the entire process is a sham. But my concern for the health and safety of those who inhabit this uniquely beautiful and peaceful mountain and valley community wouldn't allow me to remain quiet. One jet crash could easily burn tens of thousands of acres of National Forest, Wilderness, and private property, as much of the mountain area is inaccessible. You might respond that a crash is unlikely. Well, it happens, and it only takes one. Of course, if you want to look at the daily hazards, studies have shown that sudden, loud noises such as those created by F-111s, F-16s and the like adversely affect humans and animals. Fuel dumping is an environmental hazard. The bottom line is, if the Draft EIS honestly balanced the adverse impacts and the need for the CAI, the CAI would not be approved. 3

There are few places like the Wet Mountains left in the U.S. Destruction of the peace and quiet here will damage our country. The Air National Guard has not been able to justify the CAI. And the Draft EIS did not accomplish what it is required by law to do: Study the impacts of the proposed CAI, such as sudden, loud noise in a quiet natual setting. Do not approve the CAI. 4

Sincerely,

Kristen Olson

cc: Custer County Action Association, Governor Roy Romer, Senator Ben Nighthorse Campbell, Senator Hank Brown, Congressman Scott McInnis

RESPONSES TO COMMENTS

Response to Comment No.1

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

Response to Comment No.2

The approach used in the EIS has been modified. The Federal Interagency Committee on Noise (FICON), representing a variety of Federal agencies with a mix of concerns associated with aircraft noise, reviewed aircraft noise analyses issues in 1992. This committee's report (FICON 1992) continued an approach to evaluating relative impacts associated with aircraft noise that has been recognized by noise analysis experts as the most widely endorsed and comprehensive approach to aircraft noise analysis available. This approach to noise analysis was incorporated into the analyses associated with the Draft EIS. In general, Federal land use compatibility criteria are derivatives of guidelines first devised for land near airports. All land use compatibility is based on the use of Day-Night Average Sound Level (abbreviated as DNL or Ldn) as the descriptor representing community noise environments. The criteria treat areas below DNL 65 dB as compatible for all uses, including residential, and they treat DNL 65 dB as a threshold for significant exposure. There is no generally accepted method for treating rural areas differently for these purposes.

However, many EIS reviewers, including some members of the Federal regulatory community, felt the application of the FICON standards, and the 65 dB threshold, to a rural setting was inappropriate for such areas with more quiet ambient noise conditions. Consequently, the use of the 65 dB threshold as the sole means to assess relative impacts or the acceptability of noise levels associated with aircraft operations addressed in the EIS has been modified and the analysis now includes additional information to evaluate potential impacts.

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RESPONSES TO COMMENTS

Response to Comment No.3

The fire potential associated with aircraft overflights is generated from the potential for an aircraft crash and the use of flares in training. The EIS evaluated the potential for an aircraft crash resulting from the proposal. This evaluation determined that the likelihood of an aircraft crash would be very low. Therefore, the potential for a fire resulting from an aircraft crash would also be very low. In fact, military accidents have declined in the past decade, as described in the February 1996 report of the General Accounting Office, an organization under the U.S. Congress.

Authorized users of the airspace have proposed the continued use of flares in their training. However, the flares would not be released below 2,000 feet AGL. Once a flare is released, it ignites immediately. The burn time for a flare is approximately 4.0 to 4.5 seconds. In those 4.0 to 4.5 seconds, the flare falls approximately 500 feet. This leaves a safety margin of approximately 1,500 feet to allow for a flare that burns for more than 4.5 seconds to extinguish itself. The 140 WG has no record of any fires being caused by flares released during current training missions by any aircraft utilizing Colorado Airspace Initiative airspace.

Fuel dumping by aircraft using CAI airspace is not anticipated. In addition, the F-16 aircraft is not capable of dumping fuel.

Response to Comment No.4

The Colorado Airspace Initiative is not an expansion of airspace, but rather a modification. In many cases, this modification actually results in a reduction of airspace and/or number of sorties flown. The need for the Colorado Airspace Initiative is presented in Subsection 1.3 of the EIS.

Program Manager, CAI EIS
ANGRC CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

June 1, 1996

Attn: Air National Guard

We strongly oppose the Air National Guards Military Operations Area, and Military training Routes over our Beautiful Valley.

We were attracted to this beautiful area several years ago and planned on using it for our retirement.

We are now ready to move to the Area and we now understand that the National Guard wants to use it for MOA's and MTR's. Shame on you. 1

This property is as close to heaven as you can get; Quiet, Peaceful and Beautiful.

The wildlife will be endangered, the risk of crashes that would lead to forest fires and certainly property values will be diminished. The noise level will be incomprehensible. 2, 3, 4

So Please do not consider this peaceful quiet area for your Colorado Airspace Initiative.

Sincerely,
Mr. & Mrs. Wallace Reynolds

Mr. & Mrs. Wallace Reynolds
79860 Fiesta Dr.
LA Quinta, CA 92253

RESPONSES TO COMMENTS

Response to Comment No.1

Because of the many avenues through which the public has received information on the CAI, including both factual and nonfactual information from various sources, some confusion may exist about the existing airspace and proposed new airspace, particularly for the Wet Mountain Valley and the San Luis Valley. The La Veta MOA is an existing airspace. No changes are proposed for this airspace.

VR-413 is also an existing airspace; however, under the Preferred Alternative, its width would be reduced in size and its eastern boundary moved away from the Sangre de Cristo Mountains. The minimum altitude would be raised from surface level to 500 feet above ground level. VR-412, which is currently a low-altitude route through the Wet Mountain Valley, would be eliminated altogether under the Preferred Alternative, thus eliminating low-altitude training completely from the Wet Mountain Valley. Sorties over the Wet Mountain Valley also are reduced under the Preferred Alternative.

Response to Comment No.2

Studies conducted on wildlife have shown that numerous wildlife species have the ability to adapt to the presence of man and various man-made sound sources, including jet aircraft noise. While the noise generated from low-altitude military overflights may be initially startling, habituation to jet aircraft noise occurs with most wildlife species. Species-specific responses to low-altitude overflights vary considerably, and responses from individual animals may have the potential to cause injury. However, wildlife populations are usually affected only when a variety of factors work in combination to impact them, including declines or fluctuations in the availability of a food source, habitat destruction or alteration, predation, hunting, trapping, poaching, disease, or inclement weather, rather than noise alone. Normally, it would be unrealistic to predict or attribute any wildlife population declines to a single stressor, such as noise. In addition, no published scientific evidence was identified that indicated harm may occur to wildlife as a result of exposure to the levels of noise generated by military aircraft that would utilize the airspace associated with the Colorado Airspace Initiative.

Response to Comment No.3

The fire potential associated with aircraft overflights is generated from the potential for an aircraft crash or the use of flares in training. The EIS evaluated the potential for an aircraft crash resulting from the proposal. This evaluation determined that the likelihood of an aircraft crash would be very low. Therefore, the potential for a fire resulting from an aircraft crash would also be very low. In fact, military accidents have declined in the past decade, as described in the February 1996 report of the General Accounting Office, an organization under the U.S. Congress.

Authorized users of the airspace have proposed the continued use of flares in their training. However, the flares would not be released below 2,000 feet AGL. Once a flare is released, it ignites immediately. The burn time for a flare is approximately 4.0 to 4.5 seconds. In those 4.0 to 4.5 seconds, the flare falls approximately 500 feet. This leaves a safety margin of approximately 1,500 feet to allow for a flare that burns for more than 4.5 seconds to extinguish itself. The 140 WG has no knowledge of any fires being caused by flares released during current training missions by any aircraft utilizing Colorado Airspace Initiative airspace.

Response to Comment No.4

In order to address concerns regarding possible devaluation of real estate, the EIS evaluated historical data for property values. This analysis compares counties within the study area for the CAI, including those areas with currently utilized military airspace, to counties outside the study area. The results indicate that all counties experienced increases in property values. Further, in terms of median property values, counties within the study area for the CAI increased 99.71 percent compared to counties outside the study area, which increased 57.74 percent. Whereas a report published by the Federal Aviation Administration concludes "that noise has been shown to decrease the value of property by only a small amount--approximately 1 percent decrease per decibel (DNL)," this analysis applies to airport/airfield environments and not land areas underlying military training airspace. Therefore, although it is not possible to absolutely conclude that counties experiencing military aircraft overflights incur any greater change in real estate values than counties not experiencing similar overflight activity, it is not likely that real estate values would drop as a result of the CAI.

650

JERRY ROWTON and Company
Dealer / Jobber
P.O. Box 1268
Titusville, FL 32781-1268
407-267-6747

PROGRAM MANAGER/CAIEIS
ANGRC/CEVP
3500 FETCHET AVE.
ANDREWS AFB MD 20762-5157

Dear Sir, 1 June 1996

We were unable to attend the 18 May 1996 public meeting. We want you to know our view on the current MOA/MTR issue.

We bought our property in the Eastcliffe sub-division near Westcliffe in 1987. Our plan was to build our retirement home in the beautiful undisturbed area of the Wet Mountains when we retired from Forida. The time is has come !!!

We have kept up with the sneaky plans for a MOA and MTR for our area and we are outraged. Wake up Air National Guard this is peace time and a reduction of military operations. Again, we thought this issue had been settled. Low and behold, we find that the Air National Guard is hiding the real truth from us concerning the number of sorties flown and the noise levels these flights produce. It is one thing to choose to live near an airport and put up with noise and constant disturbance. It is another thing for the government to think it can be all powerful to destory another natural undisturbed environmental area and to think there are other MOA/MTR's already in use with the basic type of terrain that can be utilized by the Air National Gueard and the Air Force. Instead, they keep pushing there demands for our beautiful Wet Mountain Area. 1 2 3

My husband served as an Air Force Aircrewmwber foe 21 years and can not believe how the Air National Gueard and the Air Force continues to "steam-ROLL" this issue where it is definitely not needed.

We hope that you can assit us and our neighbors of the Wet Mountains.

Cordually,

Hilde R. Rowton

HILDE R. ROWTON

JERRY W. ROWTON

AMSOIL
SYNTHETIC LUBRICANTS AND FILTRATION SYSTEMS
Serving Florida Since 1974
KD4 ENVIRONMENTALLY SAFE PRODUCTS

RESPONSES TO COMMENTS

Response to Comment No.1

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This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Response to Comment No.2

Under the Preferred Alternative, the maximum number of sorties for the Colorado Airspace Initiative would decrease from 5,441 sorties to 4,909 sorties per year.

Response to Comment No.3

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

651

Detweiler
Post Office Box 91
Crestone, CO 81131

2 June 1996

Air National Guard Readiness Center
Program Manager, CAI EIS ANGRC/CEVP
3500 Fetchet Avenue
Andrews Air Force Base, MD 29762-5157

Dear Program Manager,

I am responding to the DEIS for the proposed Colorado Airspace Initiative. This document is highly unprofessional and fails to fulfill the intent of the National Environmental Protection Act. The normal bidding process was ignored, and there are numerous omissions and blatant mistakes. High quality data from people in the region of impact was excluded, such as data from the US Forest Service, National Park Service, and Adams State College, and the Colorado Division of Wildlife. Additionally, the scientific data is outdated and generalized. This overall lack of professionalism is unexcusable embarrassment and calls into question the goals of the Colo. Air National Guard. 1 2

Clearly **a new DEIS is required.** It must be **scientifically accurate and fully inclusive** of all the issues raised at the DEIS hearings and Scoping meetings. The noise impact studies need to be cumulative, not an average for the entire MTR over 24 hours. There must be genuine **mitigation of the environmental impact** in the San Luis Valley in conjunction with the US Fish and Wildlife Service, CO State Parks, and CO Division of Wildlife. 3

Why was the **"Alternative" developed by Colorado Airspace Initiative Working Committee** excluded? You must include it and **analyze it as a realistic alternative**. 4

VR-413 must be eliminated and its sorties assigned to VR-416. This was proposed in the Working Committee's Recommendation. 5

There needs to be a **Public Meeting held in Moffat**, CO, where the second largest turnout occurred for the CAI Scoping meetings. 6

Congress needs to investigate the amount of money spent on this DEIS developed without the normal bidding process.

The new DEIS must be a very professional document of which the COANG can be proud and not have its intentions called into suspicion. I 7

Thank you for your attention and I look forward to your response.

Sincerely,

Susan Detweiler

Susan Detweiler

RESPONSES TO COMMENTS

Response to Comment No.1

All contractors that prepare environmental studies for the ANG are selected through competitive procurements in accordance with the Federal Acquisition Regulations (FAR), including the firms associated with this EIS: Science and Engineering Associates, Inc.; National Security Analysts, Inc.; and Wyle Laboratories.

Response to Comment No.2

The research completed to support the preparation of the CAI EIS follows the use of various accepted scientific methodologies used to analyze pertinent potential impacts. These analyses have been prepared by qualified scientists and engineers who perform these services for a variety of customers, including the ANG.

Response to Comment No.3

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

Response to Comment No.4

The recommendations from the Working Group, presented in Appendix F, were used to develop the Preferred Alternative. Many of the airspace recommendations included in the Working Group Alternative were incorporated verbatim into the Preferred Alternative and significant portions of the other recommendations also were adopted into the alternative. As such, these recommendations are consequently evaluated in the EIS. The airspace configuration components not adopted were only eliminated after air traffic or environmental conflicts were identified that made their inclusion not feasible. The proposed configuration of military airspace and the route structure were then coordinated with Federal Aviation Administration representatives and is based on its ability to meet existing U.S. Air Force training requirements. The configuration of military airspace for the alternatives considered, including the Preferred Alternative, was derived in part by available unobligated airspace and was designed to avoid airports, instrument approaches, major airways, and known environmentally sensitive areas. The Working Group Alternative has played a very prominent role in the formation of the Preferred Alternative addressed in the EIS.

Response to Comment No.5

Military training route VR-413 is an existing airspace currently used for training. Under the Preferred Alternative, its width would be reduced in size to 6 miles. This would significantly reduce the land area under this airspace and would move its eastern boundary away from the Sangre de Cristo Mountains and the Great Sand Dunes National Monument. In addition, its turn point near Mount Blanca would be moved further south. The minimum altitude would be raised from surface to 500 feet above ground level.

Response to Comment No.6

The hearing locations were selected to ensure the inclusion of a wide geographic representation of potentially interested parties within the affected areas to ensure maximum participation. The availability of meeting rooms with the requisite facilities, that could be reserved on the dates required, also was a significant factor in the selection process. Input from the Citizens Working Group and its members was also considered. These factors were considered more significant than selecting a site primarily on the basis that it might be directly under an airspace.

Response to Comment No.7

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

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William K & Mary Ellen Fowler
585 Country Lane
Boulder, CO 80303
Aspen Ridge, Westcliffe CO 81252

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB MD 20762-5157

June 2, 1996

Dear Sirs,

We are writing to protest the planned Military Operations Area and Military Training Routes over the Wet Mountains and Valley in Custer County Colorado. There are few areas in our increasingly noise polluted environment where a the beleaguered population may rest mind, spirit and indeed, ears. The environmental impact of using this area for MOAs and MTRs extends far beyond its borders to effect the whole front range population by denying them a nearby escape from the noise of cars, trucks, jets, sirens, TV, and lawnmowers, just to mention a few! Before you make this decision you should all visit this area of peace. It is a small area geographically, indeed the Wet Mountain Valley is only seven miles across. The valley catches sound and multiplies it as the sound waves reverberate between the Sangre de Christo Mountains and the eastern Wet Mountains. The impact of the jarring roar is profound as it vibrates back and forth off the mountains sides. The argument that the average noise level would be acceptable is silly, its the peak levels that matter, that's why you use ear protection at the firing range. 1

If there should be an accidental crash, rescue would be extremely difficult because of the terrain and lack of roads and trails. A fire possibly resulting from a crash would be disastrous because of the dry forests in this area and the impossiblity of effectively fighting it due to the steep mountainous nature and remoteness of this area. 2

Cutster County is the 10th fastest growing county in the United States. Many people are seeking the solitude and silence this area offers. Please do not take away one of the few last "Waldens" left in the United States. 3

I am sure that alternatives to this area may be easily found. I know that many counties in Colorado, already sparsely populated are loosing population. Perhaps these areas could be used. If not then consider adding the noise pollution where it already exists and buzz some of the buildings used by federal employees. They are the ones getting paid to make it, we only pay for it. This is something we strongly desire NOT to pay for. 4

Sincerely,

William K Fowler
Mary Ellen Fowler

William K and Mary Ellen Fowler 5

RESPONSES TO COMMENTS

Response to Comment No.1

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Response to Comment No.2

The level of reflected sounds in a valley seven miles across would be substantially below the direct sound, and would not affect the cumulative noise impact. Noise levels from the proposed action will be below those which present risk to hearing.

Response to Comment No.3

Initial response to an aircraft accident is the responsibility of the civilian authorities nearest the crash site, who would provide emergency services such as fire, police, and medical assistance, as necessary. It is the responsibility of the civilian unit responding to an aircraft accident to determine what response actions they are capable of performing, including the evaluation of proper personnel training and response equipment. If the responding unit is not capable of performing certain response actions, they should request assistance from the nearest civilian unit capable of performing the required response. In the event of an aircraft accident, the nearest USAF installation would be notified by these authorities. In most cases, the nearest USAF installation would have been previously notified by the USAF unit associated with the downed aircraft. Upon notification of the aircraft accident, the commanding officer of the nearest USAF installation dispatches a Disaster Response Force. The Disaster Response Force includes personnel who have been trained to respond to this type of occurrence, and would include disaster preparedness, security police, medical, fire department, legal, munitions, mortuary, and others as required. The Disaster Response Force would assist local response teams in matters of fire suppression, site security, medical treatment and evacuation, accident evaluation and investigation, retrieval of classified materials or equipment, and protective measures, such as munitions disposal and hazardous/toxic materials protective measures. When necessary, the Disaster Response Force would coordinate activities with other regional response forces to ensure all personnel and equipment are obtained for proper mitigation and control of the accident site. It is the ANG policy to provide training, upon request, on aircraft accident emergency response to any recognized emergency response agency.

Response to Comment No.4

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.5

The use of other training areas was examined as part of the development of the alternatives studied in detail in the EIS in Subsection 2.3. The proposal was designed to minimize conflicts with potentially sensitive areas while providing the training resources necessary to meet military readiness requirements. Specific narrowing criteria for the selection of military training airspace (see Subsection 2.3.3 in Volume I) were used to evaluate other locations, and no alternative training areas were identified that could be substituted for the airspace configuration proposed in the alternatives studied in the EIS.

The primary user of the airspace included in the Colorado Airspace Initiative is the 140 WG based at Buckley Air National Guard Base in Aurora, Colorado. Because of limited resources and aeronautical constraints, virtually all of our nation's fighter units train in airspace that is within a "tank of gas" of the aircrews' base.

6-2-96

RE: Colorado Airspace Initiative

To Whom it may Concern,

I am writing my "first" letter of complaint about the proposed M.O.A. and M.T.R. of the Westcliffe, Colorado Valley.

I would hope you would reconsider your thinking of using this area. The impact you will have on the wildlife and domesticated animals would be adverse. This is a major calving and birthing area for elk, goats, deer, sheep, eagles etc., not to mention the ranching operations that would be jeopardized because of the noise. I live in the valley by Beale A.F.B. in California; so don't tell me about the so-called noise pollution study that show no harmful effects. How would you like to have your wife trying to have a baby in solitude with an F-15 flying a few hundred feet over your head. You would be mad and understandably so.

The eagle is our nations symbol; and an ever increasing rarity to see in the wild. I would just like to know who was the dumb ass that thought this whole thing up? Sure, it's

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RESPONSES TO COMMENTS

Response to Comment No.1

It is possible that aircraft noise could startle domestic animals, especially young or penned animals, and cause them to injure themselves. However, animals adapt and habituate to various sound sources, including jet aircraft noise. Because the airspaces associated with the CAI are mostly existing airspace that have been utilized for over 25 years, this adaptation and habituation to jet aircraft noise has likely already occurred.

Response to Comment No.2

Studies conducted on wildlife have shown that numerous wildlife species have the ability to adapt to the presence of man and various man-made sound sources, including jet aircraft noise. While the noise generated from low-altitude military overflights may be initially startling, habituation to jet aircraft noise occurs with most wildlife species. Species-specific responses to low-altitude overflights vary considerably, and responses from individual animals may have the potential to cause injury. However, wildlife populations are usually affected only when a variety of factors work in combination to impact them, including declines or fluctuations in the availability of a food source, habitat destruction or alteration, predation, hunting, trapping, poaching, disease, or inclement weather, rather than noise alone. Normally, it would be unrealistic to predict or attribute any wildlife population declines to a single stressor, such as noise. In addition, no published scientific evidence was identified that indicated harm may occur to wildlife as a result of exposure to the levels of noise generated by military aircraft that would utilize the airspace associated with the Colorado Airspace Initiative.

Response to Comment No.3

In the 16 years since the bald eagle (Haliaeetuus leucocephalus) was listed as endangered throughout the contiguous 48 states, the bald eagle population has clearly improved. As a result, the U.S. Fish and Wildlife Service has proposed the re-classification of the bald eagle from endangered to threatened in Colorado.

important to train our boys for national security, but not on top of Americas birthing area for the nations symbol. How about all of those areas of Utah and Nevada that are miles and miles of desert (ie. no birthing areas or major impact on humans.)

I own a piece of property in the Westcliffe ared and have worked my whole life to be able to retire there. I beg you to reconsider this tragedy you will commit by appairing the flyers.

I am not a threatening man, but I will remember all of the elected officals who approve this and will vote against them the first chance I get. Think now or look later.

Sincerely,

Allen Hutson

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RESPONSES TO COMMENTS

Response to Comment No.4

The use of other training areas was examined as part of the development of the alternatives studied in detail in the EIS in Subsection 2.3. The proposal was designed to minimize conflicts with potentially sensitive areas while providing the training resources necessary to meet military readiness requirements. Specific narrowing criteria for the selection of military training airspace (see Subsection 2.3.3 in Volume I) were used to evaluate other locations, and no alternative training areas were identified that could be substituted for the airspace configuration proposed in the alternatives studied in the EIS.

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Response to Comment No.5

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June 2, 1996

Program Manager CAI EIS
ANGRE/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

Please add my voice to the chorus of resounding "NO's" in regard to the LAVETA and Airburst MOAs.

As a resident of that area, I can testify as to the fact that even at current operations levels, sleep is disturbed by low-flying jets. (On one occasion, a jet flew so low, you could gesture to the pilot.)

MOST of us are acutely aware of environmental impact caused by those of us on the ground. Adding to that with unnecessary aerial sorties is a real violation of citizens' rights.

Come to our beautiful valley, visit with us, and then STAND outdoors yourselves while a jet screams over at low level.

Please regard your own statements of LA VETA as "Terrible Airspace Arrangement to accomodate maneuvering no longer acceptable to new USAF standards, environmentally saturated."

I can think of few other things that would have more of a negative impact on people, wildlife, and a cherished way of life.

Sincerely,
Kathleen A. Stocker

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RESPONSES TO COMMENTS

Response to Comment No. 1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

659

June 2, 1996

Program Manager CAI EiS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

It appears that the Air National Guard is more concerned with giving a few weekend flyers a new playground, than the citizens that pay for the fuel, the planes and the salaries. The Environmental statement is a joke. How can you really evaluate the impact on individual's lifestyle and wildlife, by averaging sound levels. The impact is determined by the peak sound levels. The Guard's approach is a little like telling someone who can't swim, that it's safe to go into the deep end of the pool, because the average depth is only 5 feet. 1

Why do we need more MOA's when the government is attempting to reduce expense, and the national debt. It is this type of self-serving attitudes that increase taxes. I live in this valley, at an altitude of about 8,500 feet, and it is beautiful and quiet, except when some jet jockey thinks it's fun to burn down the valley. Why would our government want to ruin this wildlife area? It is unnecessary. It is a bureaucracy, out of control. 2, 3

Sincerely,

Kurt P. Stocker
1077 Vista de Aspen
Westcliffe, CO, 81252

RESPONSES TO COMMENTS

Response to Comment No.1

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

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Response to Comment No.2

Training for potential military conflict in time of peace is a reality recognized by the Congress and the President. As military forces are cut back, the quality of training for existing forces must be maintained and improved to ensure our nation has an effective military. As the active duty military force is reduced in size, the ANG role and the role of the 140 WG in the total force structure is increasing. Over the past several years, the DOD has conducted studies to evaluate mission readiness and cost effectiveness of its total force. In comparison to DOD regular components, the ANG has relatively low operating costs and provides a cost effective investment.

Response to Comment No.3

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

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6-2-96

Program Manager CAI-EIS:

I own property in San Isabel, Custer County, Colorado. Here numerous head of Elk, deer and Big Horn Sheep roam, beside Bear, Foxes and many small Animals. There are also numerous cattle and sheep ranches.

Can you imagine a herd of 150 Elk stampeding through your property, because of the fear of the noise.

Please do not let this tragedy happen. Consider all we have here of rich

Very Sincerely
Rose Vigil

1

RESPONSES TO COMMENTS

Response to Comment No.1

Studies conducted on wildlife have shown that numerous wildlife species have the ability to adapt to the presence of man and various man-made sound sources, including jet aircraft noise. While the noise generated from low-altitude military overflights may be initially startling, habituation to jet aircraft noise occurs with most wildlife species. Species-specific responses to low-altitude overflights vary considerably, and responses from individual animals may have the potential to cause injury. However, wildlife populations are usually affected only when a variety of factors work in combination to impact them, including declines or fluctuations in the availability of a food source, habitat destruction or alteration, predation, hunting, trapping, poaching, disease, or inclement weather, rather than noise alone. Normally, it would be unrealistic to predict or attribute any wildlife population declines to a single stressor, such as noise. In addition, no published scientific evidence was identified that indicated harm may occur to wildlife as a result of exposure to the levels of noise generated by military aircraft that would utilize the airspace associated with the Colorado Airspace Initiative.

242L Rose M. Vigil

Air National Guard

SHIPPED JUN 0 3 1996

Morgan Alber
P.O. Box 14
Gardner, CO 81040

Dear Program Manager, CAI-EIS,

I demand a new Draft Environmental Impact Statement. The DEIS that I have been reading is biased in favor of the Colorado Air National Guard. The company that did the DEIS, Science and Engineering Association, is known to have many contracts with the military. The company also has several ex-military personnel in its employ. Furthermore the CoANG did the final editing on the document! I find little hard data in the DEIS that addresses any of the concerns that the citizens of the affected areas have expressed. Every concern that is addressed in the DEIS is listed as FONSI or "Finding No Significant Impact". 1

Examples are:

The FAA states that for every increase by one decibel there is a corresponding one percent decrease in property values. With F-16's flying over our heads emitting 130 decibels, it puts this area in a position of losing 100 percent of our property values. Yet the DEIS concludes this is not a significant impact or FONSI. 2

The DEIS concludes that noise levels will be FONSI. This was done by taking the 130 decibels generated by an F-16 and averaging it out over a 24 hour period to get a figure of 65 decibels. The sound does not filter through the air over a 24 hour time period. In real life the noise of a jet roars over our heads at 130 decibels. This is louder than a jackhammer. 3

The Colorado Air Initiative will result in 127 tons of toxic emissions. The DEIS lists this as FONSI. 4

Managers of local wildlife refuges have concluded that the number one threat to the animals in their care is the noise from overhead flights. The Division of Wildlife has stated that the noise from overhead flights may seriously decrease the number of live births from both game animals and some endangered species of birds. The DEIS has listed this concern as FONSI. 5

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RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

In order to address concerns regarding possible devaluation of real estate, the EIS evaluated historical data for property values. This analysis compares counties within the study area for the CAI, including those areas with currently utilized military airspace, to counties outside the study area. The results indicate that all counties experienced increases in property values. Further, in terms of median property values, counties within the study area for the CAI increased 99.71 percent compared to counties outside the study area, which increased 57.74 percent. Whereas a report published by the Federal Aviation Administration concludes "that noise has been shown to decrease the value of property by only a small amount--approximately 1 percent decrease per decibel (DNL)," this analysis applies to airport/airfield environments and not land areas underlying military training airspace. Therefore, although it is not possible to absolutely conclude that counties experiencing military aircraft overflights incur any greater change in real estate values than counties not experiencing similar overflight activity, it is not likely that real estate values would drop as a result of the CAI.

Agricultural engineers have expressed concern for the livestock. Currently, a majority of the citizens in this area depend on cattle and horses for their financial survival. The DEIS lists this area as one that raises hogs, sheep, and chickens! Cattle and horses are highly susceptible to loud noises. Both will abort a fetus if startled too often during pregnancy. The animals also will bolt if startled, running into fences and throwing riders. The DEIS lists this concern as FONSI. 6

The list goes on. If there is any negative data - it is skewered to look ok, such as in the case of the averaging out of the 130 decibels to make it look like 65 decibels. Every concern addressed by the DEIS results in FONSI. 7

I want to see some real research done on this area. I want hard scientific data, not a 1000+ page document based upon assumptions. I want to see people in my front yard, and in the school buildings measuring decibels. I want water samples taken. I want air tests. The Colorado Air Initiative has the potential to not only ruin our quality of life, but also to ruin our economic base, our health, and our wilderness. I expect real research to be done in light of these threats. 8, 9

The Colorado Air Initiative is being forced upon us, the very citizens who support the Colorado Air National Guard, the very citizens the Guard is sworn to protect. This in spite of our questions, our concerns, our constant plea for better research and information. Gardner, CO is in the very center of the CAI, yet we were denied both a scoping meeting and a public meeting to discuss the issues raised in the DEIS. WHY? 10

I as a citizen of Southern Colorado, demand a new Environmental Impact Statement done by a neutral third party, and one based upon scientific research instead of assumptions.

I claim that the current Draft Environmental Impact Statement is biased in favor of the Colorado Air National Guard, and that it does not adequately address the concerns of the citizens of this state. 11

Sincerely,

Morgan Alber

RESPONSES TO COMMENTS

Response to Comment No.3

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

Response to Comment No.4

The EIS evaluated aircraft air pollution resulting from each of the alternatives studied in the EIS using scientifically validated emissions modeling tools designed to predict ground-level pollutant concentrations. The total air pollution emissions from the 140 WG would be reduced under the Preferred Alternative and the Original Proposal as compared to existing conditions, because the total number of flying hours would be reduced from 5005 to 4600 hours. The cumulative air pollution concentrations, as determined through computer modeling for each of the airspace segments, could increase or decrease depending upon a variety of factors. These factors include the type of aircraft using the airspace, their altitude, frequency, power setting and meteorological conditions rather than a strict proportional relationship to the number of sorties flown. Nonetheless, under the worst case scenario modeled for each airspace segment under each of the alternatives, no air pollution concentrations resulting from aircraft operations would cause any local area to be out of compliance with Federal or state standards or make any significant impact on air quality in any area. Also, when comparing these air pollution concentrations with Federal and state limits for the Prevention of Significant Deterioration (PSD) in air quality, all levels were far below minimums.

Response to Comment No.5

Studies conducted on wildlife have shown that numerous wildlife species have the ability to adapt to the presence of man and various man-made sound sources, including jet aircraft noise. While the noise generated from low-altitude military overflights may be initially startling, habituation to jet aircraft noise occurs with most wildlife species. Species-specific responses to low-altitude overflights vary considerably, and responses from individual animals may have the potential to cause injury. However, wildlife populations are usually affected only when a variety of stressors work in combination to impact the, including declines or fluctuations in the availability of a food source, habitat destruction or alteration, predation, hunting, trapping, poaching, disease, or inclement weather, rather than noise alone. Normally, it would be unrealistic to predict or attribute any wildlife population declines to a single stressor, such as noise. In addition, no published scientific evidence was identified that indicated harm may occur to wildlife as a result of exposure to the levels of noise generated by military aircraft that would utilize the airspace associated with the Colorado Airspace Initiative.

In addition, numerous studies have shown that military aircraft noise does not affect the birthing success of a variety of wildlife species.

RESPONSES TO COMMENTS

Response to Comment No.6

It is possible that aircraft noise could startle domestic animals, especially young or penned animals, and cause them to injure themselves. However, animals adapt and habituate to various sound sources, including jet aircraft noise. Because the airspaces associated with the CAI are mostly existing airspace that have been utilized for over 25 years, this adaptation and habituation to jet aircraft noise has likely already occurred.

Response to Comment No.7

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.8

The research completed to support the preparation of the CAI EIS follows the use of various accepted scientific methodologies used to analyze pertinent potential impacts. These analyses have been prepared by qualified scientists and engineers who perform these services for a variety of customers, including the ANG.

Response to Comment No.9

Many citizens have expressed concern that their quality of life, which is based directly on the kind of lifestyle that they can enjoy while residing in or visiting the State of Colorado, will be changed by implementation of the CAI. The U.S. Air Force, including the ANG, has been conducting military aircraft operations in the Wet Mountain Valley and the San Luis Valley areas where people are most concerned for approximately 25 years. Most of the military airspace proposed under any of the alternatives is currently in use. Commercial aircraft overflights have also been taking place and will continue to do so. Citizens may notice changes in military aircraft overflights in certain areas associated with the CAI. The number of sorties are proposed to increase moderately in portions of the study area and decrease in others. Overall sorties will be reduced from 5,441 to 4,909 under the Preferred Alternative. The bottom altitudes of several airspaces where citizens are most concerned have been raised to reduce noise levels. Therefore, existing quality of life should not be changed.

Response to Comment No.10

The hearing locations were selected to ensure the inclusion of a wide geographic representation of potentially interested parties within the affected areas to ensure maximum participation. The availability of meeting rooms with the requisite facilities, that could be reserved on the dates required, also was a significant factor in the selection process. Input from the Citizens Working Group and its members was also considered. These factors were considered more significant than selecting a site primarily on the basis that it might be directly under an airspace.

Response to Comment No.11

Comment noted (see Section 6 in Volume I concerning incorporation of public comments)

Huajatollas Food Co-op



P.O. BOX 87 GARDNER, COLORADO 81040 (719) 746-2314

Dear Sirs:

I am writing to express my complete objection to implementation of the La Veta MOA. 1

Your draft resolution explains why fly overs here are totally unnecessary! Even at high flyovers we can't hear each other in the store. And it has been shown that eagles leave nests with just one low fly over. 2

Please concentrate your efforts on the proposed site 30 miles SE of Pueblo, and leave our newly designated wilderness areas, our homes, schools and businesses in peace & quiet that we treasure so much. 3

Sincerely,

Randy Dressler

RANDY DRESSLER

999

RESPONSES TO COMMENTS

Response to Comment No.1

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Response to Comment No.2

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.3

The use of other training areas was examined as part of the development of the alternatives studied in detail in the EIS in Subsection 2.3. The proposal was designed to minimize conflicts with potentially sensitive areas while providing the training resources necessary to meet military readiness requirements. Specific narrowing criteria for the selection of military training airspace (see Subsection 2.3.3 in Volume I) were used to evaluate other locations, and no alternative training areas were identified that could be substituted for the airspace configuration proposed in the alternatives studied in the EIS.

The primary user of the airspace included in the Colorado Airspace Initiative is the 140 WG based at Buckley Air National Guard Base in Aurora, Colorado. Because of limited resources and aeronautical constraints, virtually all of our nation's fighter units train in airspace that is within a "tank of gas" of the aircrews' base.

2441 Randy Dressler

1269 CO. RD. 626
Gardner, CO. 81040

June 3, 1996

Dear

Recently, on May 9, 1996, I attended a scoping meeting hosted by the Colorado Air National Guard in Westcliffe, CO. At that time I wrote a letter of my complaints against the Draft Environmental Impact Statement that the COANG had published in April, 1996. This is that letter that I am now sending to you. Please consider these heart-felt comments and act accordingly.

667

TO THE COLORADO AIR NATIONAL GUARD:

These complaints are in response to your Draft Environmental Impact Statement which took you four years to compile, spending 1.5 million of the taxpayer's money. I received my copy of this document 45 days ago.

1- It is unfair and possibly illegal for you to get a fair response from the citizens involved in this DEIS by June 5th. You promised us ample time to respond and a meeting in Gardner, CO. This clearly did not happen. 1, 2

2- Two years ago you held a scoping meeting in Gardner and in 5 other counties. Thousands of private citizens, as well as, organizations; ie: The Cattlemen's Association, various religious and environmental groups, have all expressed their concerns in regard to the impact of low flying sorties. There are socio-economic impacts of property values, tourism and environmental (eg. breeding patterns of domestic and wildlife animals, our businesses - real estate, tourism (in Huerfano County 4.8 million dollars was received in 1995 by tourists.) Nintey-five percent of these issues were not addressed by you. The DEIS stated FONSI,finding of no significant impact. We are not muted like our animal friends without any power of speech. We have spoken and written our real concerns. Are you deaf to our requests? Obviously, yes! 3

3- In earlier documents you the COANG have stated that the LaVeta MOA was too narrow and too small for a bombing range. Why not investigate other areas and create a new bombing range? Two Buttes - Pinyon Canyon is an appropriate area without impact to animals and people. Why not use this area which is several times larger than the proposed LVMOA? It also has a good southern boundary access. The preferred alternative has no clear advantages over other options which are rejected without being considered. 4

4-"Operation Desert Storm" used low-flying aircraft unsuccessfully

RESPONSES TO COMMENTS

Response to Comment No.1

The Council on Environmental Quality provides guidelines for the preparation of Environmental Impact Statements, and the review of EISs by the public and various government agencies. These guidelines direct agencies to "allow not less than 45 days for comments on draft statements" (Section 1506.10 of these guidelines). The comment period for the CAI Draft EIS officially opened March 29, 1996 with the Notice of Availability published in the Federal Register. The initial mailing of the statement to over 750 addressees was accomplished on March 20, 1996 prior to the NOA. The close of the comment period was initially published as June 5, 1996 (68 days), and then extended to July 12, 1996 (105 days).

Response to Comment No.2

The hearing locations were selected to ensure the inclusion of a wide geographic representation of potentially interested parties within the affected areas to ensure maximum participation. The availability of meeting rooms with the requisite facilities, that could be reserved on the dates required, also was a significant factor in the selection process. Input from the Citizens Working Group and its members was also considered. These factors were considered more significant than selecting a site primarily on the basis that it might be directly under an airspace.

Response to Comment No.3

All comments received during the scoping process associated with this EIS were considered in the preparation of the document. Such comments, as they relate to the proposal, have helped to improve the EIS process and have become a part of the administrative record for the proposal.

Response to Comment No.4

The Airburst Range currently has no physical connection to the La Veta MOA. The Governor's recommendations included the request to examine long range viability of the range. This request has been honored by the Air National Guard.

and changed to medium and higher flying altitudes to adjust their manuvers. Here is a real war that has established flying guides for various aircraft. Why is the COANG ignoring this situation as a model in which to develop specific guidelines to fly its war-ready aircraft? 5

5- As an 18 year resident of Huerfano County I have enjoyed the incredible peace and beauty of this area. After living in NYC for 25 years I know about noise impact. Why have I moved to an area of low noise impact for this type of lifestyle conducive to meditation, horseback riding, long walks in the wilderness with ample quiet time only to live in fear of losing every resource I have? My home, land, livelihood, health and healthcare, 360 acre environment all will be totally and irreversibly altered forever. If this proposal impacts me it will effect all of my brothers and sisters: - humans, animals, trees, mountains, land - everyone and everything! 6

Please take these concerns to heart and move the proposed LVMOA and Fremont MOA to a more appropriate area. (Two Buttes Pinyon Canyon).

Thank-you for your time.

Sincerely yours,

Paulette Fowler

Paulette Fowler

RESPONSES TO COMMENTS

Response to Comment No.5

Low-altitude flights allow pilots to learn to avoid detection and to survive in combat. Low-altitude flying provides a significant operational procedure through which detection can be minimized. Training is essential to acquire the skill to use this procedure. Specific combat conditions that allowed high-altitude operations in the Gulf War may not exist in future conflicts. The need for this training is required by Air Force training regulations.

Response to Comment No.6

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

699

Deirdre Garvey
370 27th Street
Boulder, CO 80303
June 3, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

Dear Sir:

I am writing to comment on the "Draft Environment Impact Statement for the Colorado Airspace Initiative."

I strongly urge the elimination of Airburst MOA, LaVeta MOA, and all MTRs leading to the Airburst Range. The noise levels discussed in the DEIS are the biggest reason. I frequently visit the wilderness and National Forest areas in this area especially to escape the noise and crowding of the Colorado Front Range. The peace and quiet of this part of the state is a truly scarce resource and should be preserved. 1 2

The noise analysis in the DEIS is flawed. By using "day-night averages" the true impact of the noise is hidden. The actual noise events will be much greater than the 65 dB FICON guidelines and the effect of those very loud noises in an otherwise quiet setting will be very disturbing. The DEIS is using noise guidelines set for communities near airports. This is inappropriate for the area impacted by this DEIS, a rural remote area with small communities, magnificent wilderness areas and national forests. Too, the valley walls and mountain ranges will reflect the noise back and magnify its effect. The intrusion of loud engine noise in a wilderness or rural setting is significant. I spent my one vacation last year on a cross-country ski trip into Yellowstone National Park. The incessant drone and whine of snowmobiles carried as much as 10-15 miles and completely destroyed the solitude of the backcountry. I will not go back and neither will most of the other skiers I have met who have done the same trip. I question the analysis in the DEIS of "No Significant Impact" in regard to noise events. I would like to see raw data from the noise tests and more specific information. 3 4 5

I also question the lack of concern in the DEIS over the effects of low-altitude flights. These are especially disruptive due to the very close noise and visual impact. A low-altitude overpass can turn a quiet backback trip into a trip to a war zone. I do not want to be used for "target practice" by training pilots. I have been rock climbing in a canyon here in the Front Range and had pilots fly through the canyon on a lark. The sound and shock waves knocked my leader off and it took some time to recover our hearing.

I also question the lack of impact cited in the DEIS on the wildlife and domesticated animals from the noise levels. I would like to see more information from the US and Colorado Fish & Wildlife agencies. 6 7 8

In general I found the DEIS sketchy and often contradictory. There is very little good "hard" data and reasonable alternatives. Again, I strongly urge the elimination of Airburst MOA, LaVeta MOA, and all MTRs leading to the Airburst Range. 9

RESPONSES TO COMMENTS

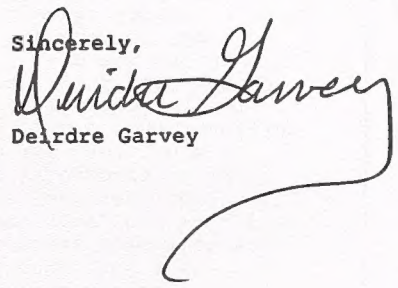
Response to Comment No.1

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

Response to Comment No.2

There would be some changes in sortie numbers, noise levels, and airspace dimensions under the Original Proposal and the Preferred Alternative addressed in the EIS. However, overall flying hours of the 140 WG will be reduced from 5005 hours to 4600 hours. When compared to existing military aircraft training in the study area, these changes would not change the current levels of solitude and peace and quiet experienced by residents. As under current conditions, noise from military aircraft operations may periodically disturb citizens and affect their enjoyment of solitude; however, opportunities for abundant periods of total peace and quiet would continue as under present conditions.

Sincerely,



Deirdre Garvey

670

RESPONSES TO COMMENTS

Response to Comment No.3

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

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RESPONSES TO COMMENTS

Response to Comment No.4

The approach used in the EIS has been modified. The Federal Interagency Committee on Noise (FICON), representing a variety of Federal agencies with a mix of concerns associated with aircraft noise, reviewed aircraft noise analyses issues in 1992. This committee's report (FICON 1992) continued an approach to evaluating relative impacts associated with aircraft noise that has been recognized by noise analysis experts as the most widely endorsed and comprehensive approach to aircraft noise analysis available. This approach to noise analysis was incorporated into the analyses associated with the Draft EIS. In general, Federal land use compatibility criteria are derivatives of guidelines first devised for land near airports. All land use compatibility is based on the use of Day-Night Average Sound Level (abbreviated as DNL or Ldn) as the descriptor representing community noise environments. The criteria treat areas below DNL 65 dB as compatible for all uses, including residential, and they treat DNL 65 dB as a threshold for significant exposure. There is no generally accepted method for treating rural areas differently for these purposes.

However, many EIS reviewers, including some members of the Federal regulatory community, felt the application of the FICON standards, and the 65 dB threshold, to a rural setting was inappropriate for such areas with more quiet ambient noise conditions. Consequently, the use of the 65 dB threshold as the sole means to assess relative impacts or the acceptability of noise levels associated with aircraft operations addressed in the EIS has been modified and the analysis now includes additional information to evaluate potential impacts.

Response to Comment No.5

Individuals have personal opinions of various sounds. The analysis presented in the EIS assesses the potential for objective adverse impact on the community as a whole.

Response to Comment No.6

It is possible that aircraft noise could startle domestic animals, especially young or penned animals, and cause them to injure themselves. However, animals adapt and habituate to various sound sources, including jet aircraft noise. Because the airspaces associated with the CAI are mostly existing airspace that have been utilized for over 25 years, this adaptation and habituation to jet aircraft noise has likely already occurred.

Response to Comment No.7

Studies conducted on wildlife have shown that numerous wildlife species have the ability to adapt to the presence of man and various man-made sound sources, including jet aircraft noise. While the noise generated from low-altitude military overflights may be initially startling, habituation to jet aircraft noise occurs with most wildlife species. Species-specific responses to low-altitude overflights vary considerably, and responses from individual animals may have the potential to cause injury. However, wildlife populations are usually affected only when a variety of factors work in combination to impact them, including declines or fluctuations in the availability of a food source, habitat destruction or alteration, predation, hunting, trapping, poaching, disease, or inclement weather, rather than noise alone. Normally, it would be unrealistic to predict or attribute any wildlife population declines to a single stressor, such as noise. In addition, no published scientific evidence was identified that indicated harm may occur to wildlife as a result of exposure to the levels of noise generated by military aircraft that would utilize the airspace associated with the Colorado Airspace Initiative.

Response to Comment No.8

The ANG has been and will continue to work with the U.S. Fish and Wildlife Service, the Colorado Division of Wildlife, and other regulatory agencies to assess the effects of their actions on wildlife within the areas affected by its operations.

Response to Comment No.9

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

1282 Scrub Oak Circle
Boulder, CO 80303-6218
June 3, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Ave.
Andrews AFB, MD 20762-5157

Sir:

I would like to place on record my objection to the Colorado Airspace Initiative. I believe that elimination of Airburst MOA, LaVeta MOA, VR-413, and all MTR's leading to Airburst Range is in the best interest of all living in the area and the environment at large. The sudden loud noise accompanying all types of military aircraft has a severely negative impact in the naturally serene and quiet setting in the proposes MOAs. 1

I have personally experienced the sudden arrival of military jets in the Sangre De Christo/Westcliffe area (and others) and I find it completely antithetical to the reason I am in this area to begin with. The jets are frightening and disruptive. I also feel angry that they would invade such a pristine area. I have purchased property in the Wet Mountains near Westcliffe with the hope of moving there permanently someday soon. Other family members are pursuing the same idea. I hate the thought of having jets buzzing the area, flying low, practicing war games. I also hate the thought of having to move out with property values dropping at the same time. I already have people kidding me about winding up in the middle of a MOA and the concomitant loss of peace and quiet. I am sure many business people in the area have the same concern. I do not consider this a "minimal impact". I consider this a severe impact. 2 3

I have looked over the DEIS and in spite of its volume and apparent thoroughness, I find it completely lacking in integrity in its measurement of noise analysis. It makes no sense to quantify averages in the way it does. We are not talking about highways or airports here but spikes of intense noise more similar to explosions. Its the sudden unpredictable intense spikes that are damaging. This is not taken into consideration. This problem cannot be ignored. Another problem with the DEIS is the failure to take into consideration future growth of the counties involved. Custer county for example might seem like a good place for military exercises because of its low population density. However, there are literally thousands of acres of relatively unpopulated subdivided land that in the near future will be full of homes. I hardly think training flights over urban areas is appropriate. I am not anti-military. I believe a strong capable, well trained airforce is crucial for the future of our country. However, I strongly believe that the Wet Mountain, Wet Valley, Sangre De Chirsto area is totally inappropriate for military training. 4 5

Overall, taking into consideration the whole area, its environmental sensitivity, its economic base, its demographics, this unique and pristine land should not be denigrated by turning it into a military training area 6

Sincerely,

Arthur Greslin

Arthur Greslin

673

RESPONSES TO COMMENTS

Response to Comment No.1

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

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In order to address concerns regarding possible devaluation of real estate, the EIS evaluated historical data for property values. This analysis compares counties within the study area for the CAI, including those areas with currently utilized military airspace, to counties outside the study area. The results indicate that all counties experienced increases in property values. Further, in terms of median property values, counties within the study area for the CAI increased 99.71 percent compared to counties outside the study area, which increased 57.74 percent. Whereas a report published by the Federal Aviation Administration concludes "that noise has been shown to decrease the value of property by only a small amount--approximately 1 percent decrease per decibel (DNL)," this analysis applies to airport/airfield environments and not land areas underlying military training airspace. Therefore, although it is not possible to absolutely conclude that counties experiencing military aircraft overflights incur any greater change in real estate values than counties not experiencing similar overflight activity, it is not likely that real estate values would drop as a result of the CAI.

Response to Comment No.3

There would be some changes in sortie numbers, noise levels, and airspace dimensions under the Original Proposal and the Preferred Alternative addressed in the EIS. However, overall flying hours of the 140 WG will be reduced from 5005 hours to 4600 hours. When compared to existing military aircraft training in the study area, these changes would not change the current levels of solitude and peace and quiet experienced by residents. As under current conditions, noise from military aircraft operations may periodically disturb citizens and affect their enjoyment of solitude; however, opportunities for abundant periods of total peace and quiet would continue as under present conditions.

RESPONSES TO COMMENTS

Response to Comment No.4

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

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RESPONSES TO COMMENTS

Response to Comment No.5

Projections of future conditions were previously addressed in the EIS in Subsection 4.9.1.2.

There are a number of factors, in addition to the avoidance of more populated urban areas, that are considered when designing airspace configuration, including Federal Aviation Administration restrictions, and avoiding conflicts between operations of military and civilian aircraft at airports, along air routes, and in other operational areas.

Response to Comment No.6

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

2540 6th Street
Boulder, CO 80304
3 June, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Ave.
Andrews AFB, MD 20762-5157

To whom this may concern:

I am writing to express my strenuous objection to the Colorado Airspace Initiative. The Region of Impact includes two National Wilderness Areas, two National Forests, three state parks, a wildlife refuge, thousands of acres of BLM-managed public lands, and immediately borders the perimeter of the Great Sand Dunes National Monument. 1

For the DEIS to show a finding of "no significant impact" is patently absurd. This region is unique, not only in Colorado, but in western North America as a whole. It is not a "deserted" area that would be unaffected by training flights. These flights would have a disastrous effect on wildlife, the environment, and on the peace and quiet that makes for a distinct way of life. 2 3

As one who spends considerable time in the area under review, I am asking you to eliminate Airburst MOA, La Veta MOA, VR-413, and all MTRs leading to Airburst Range. 4

Thank you for the opportunity to offer these comments.

Sincerely,

Tim Hogan

cc: Colorado Airspace Alliance

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RESPONSES TO COMMENTS

Response to Comment No.1

The ANG adheres to its "Policy on Air National Guard Overflights of Designated Wilderness and Wild and Scenic Rivers," as presented in Appendix L. This policy is intended to protect specifically identified areas, such as the Sangre de Cristo and Greenhorn Mountain Wilderness Areas, by limiting training operations to no lower than 2,000 feet above ground level whenever possible unless safety of the flight or operational parameters (e.g., weather conditions) may be compromised.

Response to Comment No.2

Studies conducted on wildlife have shown that numerous wildlife species have the ability to adapt to the presence of man and various man-made sound sources, including jet aircraft noise. While the noise generated from low-altitude military overflights may be initially startling, habituation to jet aircraft noise occurs with most wildlife species. Species-specific responses to low-altitude overflights vary considerably, and responses from individual animals may have the potential to cause injury. However, wildlife populations are usually affected only when a variety of factors work in combination to impact them, including declines or fluctuations in the availability of a food source, habitat destruction or alteration, predation, hunting, trapping, poaching, disease, or inclement weather, rather than noise alone. Normally, it would be unrealistic to predict or attribute any wildlife population declines to a single stressor, such as noise. In addition, no published scientific evidence was identified that indicated harm may occur to wildlife as a result of exposure to the levels of noise generated by military aircraft that would utilize the airspace associated with the Colorado Airspace Initiative.

Response to Comment No.3

There would be some changes in sortie numbers, noise levels, and airspace dimensions under the Original Proposal and the Preferred Alternative addressed in the EIS. However, overall flying hours of the 140 WG will be reduced from 5005 hours to 4600 hours. When compared to existing military aircraft training in the study area, these changes would not change the current levels of solitude and peace and quiet experienced by residents. As under current conditions, noise from military aircraft operations may periodically disturb citizens and affect their enjoyment of solitude; however, opportunities for abundant periods of total peace and quiet would continue as under present conditions.

Response to Comment No.4

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

248L Tim Hogan

678

9015 West Arbor Drive
Littleton, CO 80123
June 3, 1996

Air National Guard Readiness Center
Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews Air Force Base, MD 20762-5157

Dear Sirs,

The Draft Environmental Impact Statement for the Colorado Airspace Initiative exhibits a number of defects: no discussion of military aircraft training activity within the CAI beyond that of the COANG; use of an inappropriate noise standard, 65 dB, to rate community noise impact; and an inaccurate summary statement, particularly within sections 2.6.1.5 and 2.6.2.

Other Military Aircraft Training Activity
It is to be expected that ANG units from other states and the USAF will make use of MTRs and MOAs in Colorado. There is little discussion of this impact. These secondary impacts, which apply to each of the proposals, should be thoroughly discussed in the DEIS. - 1

Inadequate Noise Analysis
There are three problems with the noise analysis: application of an urban noise standard to a rural setting; inadequate consideration of the suddenness of noise, particularly in a mountainous environment; and no consideration of the quality of the noise.
The standard of 65 dB, while it may or may not be appropriate for urban land use, is clearly inappropriate for rural areas. A more appropriate standard for rural land use would be 50 dB. If the DEIS uses an urban standard, after allowing for residential reduction of 25-30 dB, the remaining noise would be near 50 dB, see page G-9. Put another way, if 50 dB is approximately equal to daytime and nighttime sound levels in the areas monitored, once again that would appear to be a more appropriate standard for the CAI. Of course, if this more restrictive standard were applied, the number of daily noise events would rise substantially, but a 50 dB standard would also reflect what rural residents will experience under the CAI. - 2
The suddenness of a noise event may be of greater concern to a human being than the volume of the noise. This is particularly true in a hilly or mountainous environment where the victim of the noise may be unaware of - 3

RESPONSES TO COMMENTS

Response to Comment No.1

All aircraft that would use each of the proposed airspace associated with the Colorado Airspace Initiative are shown in Appendix E and/or Appendix N.

Response to Comment No.2

The approach used in the EIS has been modified. The Federal Interagency Committee on Noise (FICON), representing a variety of Federal agencies with a mix of concerns associated with aircraft noise, reviewed aircraft noise analyses issues in 1992. This committee's report (FICON 1992) continued an approach to evaluating relative impacts associated with aircraft noise that has been recognized by noise analysis experts as the most widely endorsed and comprehensive approach to aircraft noise analysis available. This approach to noise analysis was incorporated into the analyses associated with the Draft EIS. In general, Federal land use compatibility criteria are derivatives of guidelines first devised for land near airports. All land use compatibility is based on the use of Day-Night Average Sound Level (abbreviated as DNL or Ldn) as the descriptor representing community noise environments. The criteria treat areas below DNL 65 dB as compatible for all uses, including residential, and they treat DNL 65 dB as a threshold for significant exposure. There is no generally accepted method for treating rural areas differently for these purposes.

However, many EIS reviewers, including some members of the Federal regulatory community, felt the application of the FICON standards, and the 65 dB threshold, to a rural setting was inappropriate for such areas with more quiet ambient noise conditions. Consequently, the use of the 65 dB threshold as the sole means to assess relative impacts or the acceptability of noise levels associated with aircraft operations addressed in the EIS has been modified and the analysis now includes additional information to evaluate potential impacts.

Response to Comment No.3

The noise analysis included penalties of up to 11 dB for the suddenness (onset rate) of high speed aircraft noise, referred to in Appendix G (subsection G.1.2.4) as a "startle" factor.

its source. This issue is not addressed.
Noise quality, although subjective, may be measured by community standards, as well as by continuity and meaning. Certainly the DEIS should acknowledge that 50 dB produced by a chainsaw is qualitatively different than 50 dB produced by a creek, or that 100 dB produced by a passing truck on a highway is qualitatively different from 100 dB produced by a passing F-16 in a roadless area. 4

Inaccurately Stated Summary
The "Summary of Findings and Comparison of Reasonable Alternatives" beginning on page 2-47 should be reviewed and rewritten to accurately reflect the material presented in both the *Impact Analysis* and in the *Appendices*. Two examples are presented of inaccurate representations of the material: Section 2.6.1.5 states, "Aircraft operations are sporadic and would exist for a short period of time and then disappear." In fact, although they may be sporadic, aircraft operations may exist for an extended period of time in the case of operations within an MOA. An aircraft may stay within an MOA for 30 or 40 minutes, see page N-3. In one example an aircraft spends 16 minutes below 5,000 feet AGL in the La Veta MOA. Five minutes of that below 1,500 feet, see table E-41. 5
Section 2.6.1.5 also states, "The assessment of potential impacts from noise on aesthetics as a result of the Original Proposal or the Preferred Alternative indicates noise levels would continue to remain within accepted land use compatibility guidelines." The guidelines were adopted by federal agencies while recognizing the preeminence of local authorities in determining appropriate land use. In any event, the guidelines cited were developed for urban land use and they should not be represented otherwise. Section 2.6.2 restates the erroneous conclusion of section 2.6.1.5 regarding short duration events and further misrepresents the conclusions of FICON 1992. 6

Thank you for your attention.

Sincerely,

Glenn Kissinger

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RESPONSES TO COMMENTS

Response to Comment No.4

It is recognized that individuals have personal opinions of various sounds. Ldn provides a metric that determines how the community on a whole would respond to a given noise level.

Response to Comment No.5

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.6

The land use guidelines were prepared for urban, suburban, and rural land use. The Final EIS evaluates the actual noise levels in each affected area, and assesses noise impact at levels below those in the Federal guidelines.

June 3, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, Md.
20762-5157

Dear Sir:

We are responding to the Draft Environmental Impact Statement Colorado Airspace Initiative, and would definitely suggest the preferred alternative that deletes VR-412. I can remember one occasion several years ago when a plane flew close enough to our cabin that I could see the pilot. The Wet Mountain Valley's economic base is tourism and cattle and both will be adversely affected by frequent and noisy flights. 1

Page 2-49 talks about a Ldn of 58 dB averaged over a 24 hour period that would have a negligible impact on land use. This measurement is generally used to measure background noise in an urban setting and is improperly applied to the Wet Mountain Valley which is extremely quiet. Table s-2, preferred alternative, lists 176 sorties along VR-413. How many actual flights would be involved and during what periods? You may be able to reduce noise impact on the Sange De Cristo wilderness area by moving point D along VR-413, further west. 2, 3, 4

Thank you for considering our concerns.

Respectfully,

Howard A. Null

Carole M. Null

cc: Custer County Action Association
P.O.Box 552
Westcliffe, Co. 81252

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RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

Response to Comment No.3

The approach used in the EIS has been modified. The Federal Interagency Committee on Noise (FICON), representing a variety of Federal agencies with a mix of concerns associated with aircraft noise, reviewed aircraft noise analyses issues in 1992. This committee's report (FICON 1992) continued an approach to evaluating relative impacts associated with aircraft noise that has been recognized by noise analysis experts as the most widely endorsed and comprehensive approach to aircraft noise analysis available. This approach to noise analysis was incorporated into the analyses associated with the Draft EIS. In general, Federal land use compatibility criteria are derivatives of guidelines first devised for land near airports. All land use compatibility is based on the use of Day-Night Average Sound Level (abbreviated as DNL or Ldn) as the descriptor representing community noise environments. The criteria treat areas below DNL 65 dB as compatible for all uses, including residential, and they treat DNL 65 dB as a threshold for significant exposure. There is no generally accepted method for treating rural areas differently for these purposes.

However, many EIS reviewers, including some members of the Federal regulatory community, felt the application of the FICON standards, and the 65 dB threshold, to a rural setting was inappropriate for such areas with more quiet ambient noise conditions. Consequently, the use of the 65 dB threshold as the sole means to assess relative impacts or the acceptability of noise levels associated with aircraft operations addressed in the EIS has been modified and the analysis now includes additional information to evaluate potential impacts.

Response to Comment No.4

As noted in the Draft EIS, a sortie is a flight of one aircraft that takes off, performs a training mission and lands. Therefore, 176 sorties equals 176 individual aircraft. The 140 WG normally flies Tuesday through Friday with 8 aircraft scheduled each morning and eight more aircraft scheduled in the afternoon. These aircraft go to various military training airspace areas as dictated by the requirement of the training mission to be flown each day.

VR-413, under the Preferred Alternative, was narrowed and moved west to avoid the Great Sand Dunes National Monument and Mount Blanca. Moving the route further west would have placed it over additional population centers or airports. This was not deemed to be a viable or reasonable alternative.

JOB LUNING PRAK • 501 PENLLYN PIKE • PENLLYN, PA 19422 • (215) 628-3660

June 3, 1996

ANG Readiness Center
Program Manager, CAI-EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

Dear Sir:

Our family owns 3 sections in Custer County. We are unalterably opposed to your low level over flight plan, for reasons amply and repeatedly voiced by the Custer County Action Association. If you persist in implementing this plan, we will have no choice but to sue you for a taking of our property without compensation. 1

JOB LUNING PRAK
501 Penllyn Pike
Penllyn, PA 19422

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RESPONSES TO COMMENTS

Response to Comment No.1

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Written Comment Form

ENVIRONMENTAL IMPACT STATEMENT FOR THE COLORADO AIRSPACE INITIATIVE

If you would prefer to submit written comments on the DEIS, please use this form. Continue on the back of the form or attach extra sheets, as necessary. Thank you.

3 JUNE 96

NAME: HAROLD R. REINHART

TITLE/ORGANIZATION:

ADDRESS: P.O. Box 96 (Street) CRESTONE, Co. 81131 (City/State/Zip)

– COMMENTS –

I am a private citizen living in the Boca Grande development northeast of Crestone, Co. located in the San Luis Valley. We moved to this Valley from the midwest upon our retirement because of the beauty and tranquility of the Sangre de Cristo mountains. I am opposed to the proposed VR-413 and would support VR-416 as developed by the Colorado Airspace Initiative Working Committee. 1

When many of us wrote and spoke out during the scoping meetings of 1993-94, as a result there was to be a study of a viable alternative to the VR-413 training plan. This study was carried out during 1994. What has happened to this proposal and why hasn't it been included in the DEIS? 2

It seems to me the public hearings held over the past few weeks are a sham! Further, the DEIS fails to satisfy the National Environmental Protection Act intent. Little response has been expressed for the concerns of religious groups and the elderly living in this area about the noises from overflights. 3

Surely there are areas within the flying range of the F-16 aircraft which are more open and accessible and less populated than the San Luis Valley. 4

Please hand this form to the staff, drop into the collection box, or mail to:

Program Manager, CAI EIS
Environmental Division
Air National Guard Readiness Center/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

683

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

Proposals for VR-413 have been made to the Air National Guard via the Colorado Citizen's Working Group and other sources. Additional rerouting beyond what is included in the Preferred Alternative could not be reasonably accomplished because of existing wilderness areas or study areas, threatened and endangered species nest/habitat areas and, most importantly, access to the Airburst Range from this direction could not accommodate existing training requirements due to topography.

Response to Comment No.3

The ANG cares about the people that live near their training areas and how they feel about the activity associated with training. The NEPA process is providing the ANG with an opportunity to hear exactly what the public feels about its proposal before any decisions are made. Every scoping comment and every comment on the Draft EIS sent to the ANG has been read and incorporated into the administrative record for the proposal. Public comments have provided a better picture of what subjects the public wanted addressed in the document and have enabled the ANG to improve the EIS by adding or expanding to discussions in the Final EIS. Examples of added or expanded discussions include human health effects, natural quiet, environmental justice, amongst others.

Response to Comment No.4

The use of other training areas was examined as part of the development of the alternatives studied in detail in the EIS in Subsection 2.3. The proposal was designed to minimize conflicts with potentially sensitive areas while providing the training resources necessary to meet military readiness requirements. Specific narrowing criteria for the selection of military training airspace (see Subsection 2.3.3 in Volume I) were used to evaluate other locations, and no alternative training areas were identified that could be substituted for the airspace configuration proposed in the alternatives studied in the EIS.

The primary user of the airspace included in the Colorado Airspace Initiative is the 140 WG based at Buckley Air National Guard Base in Aurora, Colorado. Because of limited resources and aeronautical constraints, virtually all of our nation's fighter units train in airspace that is within a "tank of gas" of the aircrews' base.

CLARETHA COLORADO CORPORATION
c/o Martin H. Blank, Jr.
11755 Wilshire Blvd., Suite 1400
Los Angeles, CA 90025-1520
Telephone: (310) 477-5455
FAX: (310) 444-9203

June 4, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

Re: Colorado Airspace Initiative

To whom it may concern:

This letter represents a strong objection to the Colorado Airspace Initiative. The property owned by Claretha Colorado Corporation is valued in large part on the quiet and natural surroundings. Not only would its monetary value decrease substantially but the enjoyment of this property would decline tremendously just as soon as Military Training Routes are National Guard Military Operations Areas are established over our area. 1 2

I dispute your noise analysis computation which erroneously averages the flights over a 24 hour period instead of measuring the noise level at the time of the flights. The acceptable level of noise in a rural and mountain region is not to be measured against an urban and commercial region. 3

I insist on no less than the elimination of Airburst Military Operations Areas, LaVeta Military Operations Areas and all Military Training Routes leading to the Airburst Range. 4

Very truly yours,
Claretha Colorado Corporation

Martin H. Blank, Jr.
Vice-President

MHB/gh

cc: Custer County Action Assoc.

RESPONSES TO COMMENTS

Response to Comment No.1

In order to address concerns regarding possible devaluation of real estate, the EIS evaluated historical data for property values. This analysis compares counties within the study area for the CAI, including those areas with currently utilized military airspace, to counties outside the study area. The results indicate that all counties experienced increases in property values. Further, in terms of median property values, counties within the study area for the CAI increased 99.71 percent compared to counties outside the study area, which increased 57.74 percent. Whereas a report published by the Federal Aviation Administration concludes "that noise has been shown to decrease the value of property by only a small amount--approximately 1 percent decrease per decibel (DNL)," this analysis applies to airport/airfield environments and not land areas underlying military training airspace. Therefore, although it is not possible to absolutely conclude that counties experiencing military aircraft overflights incur any greater change in real estate values than counties not experiencing similar overflight activity, it is not likely that real estate values would drop as a result of the CAI.

Response to Comment No.2

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Response to Comment No.3

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

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The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

LAW OFFICES
OF
STEVAN R. CALVILLO
ATTORNEY AT LAW
200 OCEANGATE, SUITE 545
LONG BEACH, CALIFORNIA 90802-4327
TELEPHONE (310) 983-6624

FACSIMILE (310) 983-6626

FILE NO. _____

June 4, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews, AFD, MD 20762-5157

Re: **Expansion of the Air National Guard Military Operation Areas ("MOAs") and Military Training Routes ("MTRs")**

To whom it may concern:

Please be advised that as a property owner in Custer County, Colorado, I am appalled at the fact that the Air National Guard intends on widening their air space necessary to undertake its operations. Further, I am appalled by the fact that there has been no initial compliance or no deemed necessary compliance with requiring the Air National Guard to do an Environmental Impact Statement before processing and proceeding with the Colorado Airspace Initiative. Now, the apparent noise analysis of the Air National Guard's draft of an Environmental Impact Statement incorrectly analyzes the ambient noise levels. For example, if a jet suddenly flies over at a 110 decibels, that noise is averaged over a 24 hour period to lower the average decibel levels to reach the conclusion that the flight activity would have an "average" acceptable level. This is simply misleading and inaccurate which therefore provides an unintelligible basis to properly determine an acceptable "average" level of noise. 1 2

Therefore, I strongly urge that the Colorado Airspace Initiative be rejected because it is founded upon an inappropriate and misleading analysis.

Respectfully submitted,

STEVAN R. CALVILLO

SRC/lab
cc: Custer County Action Association
Governor Roy Romer
Congressman Scott McInnis
Senator Hank Brown
Senator Ben Nighthorse Campbell

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RESPONSES TO COMMENTS

Response to Comment No.1

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

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RESPONSES TO COMMENTS

Response to Comment No.2

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2305 Farington Rd
Wichita Falls, Tx 76308
June 4, 1996

Sirs:

This letter is to protest the Air National Guard Military Operations Areas and Military Traing Routes over the Wet Mountain Valley. It is one of the most peaceful and beautiful in Colorado. 1

Having camped there and enjoyed its beauty and peace and quiet, we bought property in Silverdiff and in the foothills bordering the National Forest. there is no way we could enjoy a peaceful sojourn there with so many loud flights a week over the valley! 2

Surely you could find an area where there would be fewer people and no forest animals to wreck the quiet of the valley! 3

Sincerely,
Mrs Hansen

688

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

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Response to Comment No.3

The use of other training areas was examined as part of the development of the alternatives studied in detail in the EIS in Subsection 2.3. The proposal was designed to minimize conflicts with potentially sensitive areas while providing the training resources necessary to meet military readiness requirements. Specific narrowing criteria for the selection of military training airspace (see Subsection 2.3.3 in Volume I) were used to evaluate other locations, and no alternative training areas were identified that could be substituted for the airspace configuration proposed in the alternatives studied in the EIS.

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689

1561 So. Foothills Hwy. C-10
Boulder, CO 80303
June 4, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

I object to the Colorado Airspace Initiative. Airburst MOA, La Veta MOA, and all MTRs leading to the Airburst Range must be eliminated! 1

My fiancée owns property in Section 19, T21S, R70W. This will become our joint property when we marry in the next year. We spend much of our free time on our land and in other areas of the Wet Mountains and Wet Mountain Valley. We love the peace and tranquility, the quiet, the wildlife. We hope to retire there within the next ten years. 2

The noise of the low level training flights disrupts the peace and tranquility of this unique wilderness area. The effect of this noise on people is obvious. The day-night averaging does not make sense to me. Just one low-level flight is intrusive. The effect of the noise on wildlife has not been adequately studied. The impact on property values has not been adequately addressed 3, 4, 5

My fiancée and I did not find out about the scheduled public meetings until after they had occurred. We would like the opportunity to have our voice heard. 6

Thank you very much for your consideration.

Sincerely,
Claire Mearns

RESPONSES TO COMMENTS

Response to Comment No.1

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

Response to Comment No.2

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.3

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

Response to Comment No.4

Studies conducted on wildlife have shown that numerous wildlife species have the ability to adapt to the presence of man and various man-made sound sources, including jet aircraft noise. While the noise generated from low-altitude military overflights may be initially startling, habituation to jet aircraft noise occurs with most wildlife species. Species-specific responses to low-altitude overflights vary considerably, and responses from individual animals may have the potential to cause injury. However, wildlife populations are usually affected only when a variety of factors work in combination to impact them, including declines or fluctuations in the availability of a food source, habitat destruction or alteration, predation, hunting, trapping, poaching, disease, or inclement weather, rather than noise alone. Normally, it would be unrealistic to predict or attribute any wildlife population declines to a single stressor, such as noise. In addition, no published scientific evidence was identified that indicated harm may occur to wildlife as a result of exposure to the levels of noise generated by military aircraft that would utilize the airspace associated with the Colorado Airspace Initiative.

Response to Comment No.5

In order to address concerns regarding possible devaluation of real estate, the EIS evaluated historical data for property values. This analysis compares counties within the study area for the CAI, including those areas with currently utilized military airspace, to counties outside the study area. The results indicate that all counties experienced increases in property values. Further, in terms of median property values, counties within the study area for the CAI increased 99.71 percent compared to counties outside the study area, which increased 57.74 percent. Whereas a report published by the Federal Aviation Administration concludes "that noise has been shown to decrease the value of property by only a small amount--approximately 1 percent decrease per decibel (DNL)," this analysis applies to airport/airfield environments and not land areas underlying military training airspace. Therefore, although it is not possible to absolutely conclude that counties experiencing military aircraft overflights incur any greater change in real estate values than counties not experiencing similar overflight activity, it is not likely that real estate values would drop as a result of the CAI.

Response to Comment No.6

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

6069

William H. Pearlman
1035 Pearl Street, Suite 206
Boulder CO 80302
Tel.: 303-415-2010 Fax.: 303-415-2005

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June 4, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

Dear Sir or Madam:

It has been my experience in business and Law that whenever someone is being dishonest or lying everyone knows it but the person doing it, and he or she thinks that everyone believes them. Further, it has been my experience that all the "great lies" of the centuries always become known eventually and the only question is how many people get hurt in the interim. Not only do the "great lies" become known but those involved become discredited and disowned by the very groups they thought they were helping in concocting the misrepresentations. This is surely the case with the DEIS for the CAI. This document or study purports to be an objective study of all possible significant impacts that would result from the planned over-flights. To a truly objective reader of only average intelligence it is preposterous that the groups studying the issue could come to a "no significant impact" conclusion. The groups that prepared the study clearly began with an objective of finding "no significant impact" and then spent four years and 1000 pages supporting that finding. If that was not enough, they then gave the public 60 days to respond. Clearly, it would take four years to properly research and respond. Therefore, I cannot properly and responsibly refute the many omissions and misrepresentations, but I can offer some first hand reactions and observations. 1

First of all, I have experienced a low level flight while relaxing on my property in the Wet Mountains, Custer County, Colorado. It was mid afternoon and my wife and I and our three dogs were relaxing outside. My wife and I were sitting in lawn chairs and reading books and dozing, when suddenly and without warning our quiet moment was torn apart. A fighter jet invaded our space. He was 100 feet off the deck and moving fast. It was 2 3

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

The Council on Environmental Quality provides guidelines for the preparation of Environmental Impact Statements, and the review of EISs by the public and various government agencies. These guidelines direct agencies to "allow not less than 45 days for comments on draft statements" (Section 1506.10 of these guidelines). The comment period for the CAI Draft EIS officially opened March 29, 1996 with the Notice of Availability published in the Federal Register. The initial mailing of the statement to over 750 addressees was accomplished on March 20, 1996 prior to the NOA. The close of the comment period was initially published as June 5, 1996 (68 days), and then extended to July 12, 1996 (105 days).

Response to Comment No.3

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

so sudden and frightening that my wife and I were literally propelled out of our chairs. The dogs took off barking. The emotional upset from that experience lasted at least 24 hours. It had a strong physical effect on all of us. What kind of people would suggest that there is "no significant impact"?

Lets stop the usual bureaucratic governmental hog-wash and be honest with each other. This is the only way to find a lasting responsible solution. Haven't we learned anything from our predecessors who conducted radiation experiments on live unsuspecting citizens. Is this much different? How will you or your children feel when they realize that you were involved in such a conspiracy? Nothing could be worth that! Lets put together a panel of military and civilians to honestly and responsibly study this question and come up with various alternatives to present to the affected public. Let them decide, by voting on which of the alternatives they would accept. Truly, when you are motivated to find an alternative or a solution it can always be done. But when you strong arm a solution down our throats it will never be done.

I strongly oppose the current DEIS for the CAI and would be happy to responsibly analyze the DEIS given sufficient time. But, I submit that the time would be better spent by approaching this problem that affects so many citizens of Colorado in a more open and honest way and truly seek a solution that would be best for all concerned. It is possible!

Very truly yours,

William H. Pearlman

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BEAR TREE PO BOX 76
HILLSIDE, COLORADO 81232

June 4, 1996

Program Manager, CAI EIS
Andrews AFB, Maryland

Sirs:

Once again I write to protest most strongly your proposed expansion of the Airburst and La Veta MOAs in Colorado. And I find myself writing in an odd mixture of anger and hopelessness. 1

Anger because, after the negative opinion of a vast majority of our population has been made very clear to you, you continue your plans to assault our environment. And require us to continue to write these letters of protest -- which obviously aren't going to be given much attention. 2

And hopelessness because I don't believe you note or care how the American public feels about your aggressive behavior. And because it appears that our elected officials, state and national, are unwilling to stand up to the military establishment, an attitude I hope will be called to attention when they next run for office. 3

Sincerely,

Don Simonton

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

The ANG cares about the people that live near their training areas and how they feel about the activity associated with training. The NEPA process is providing the ANG with an opportunity to hear exactly what the public feels about its proposal before any decisions are made. Every scoping comment and every comment on the Draft EIS sent to the ANG has been read and incorporated into the administrative record for the proposal. Public comments have provided a better picture of what subjects the public wanted addressed in the document and have enabled the ANG to improve the EIS by adding or expanding to discussions in the Final EIS. Examples of added or expanded discussions include human health effects, natural quiet, environmental justice, amongst others.

Response to Comment No.3

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

OFFICE OF THE BISHOP
1001 N. Grand Avenue
Pueblo, Colorado 81003-2948
(719) 544-9861
Fax (719) 544-5202

Catholic Pastoral Center
DIOCESE OF PUEBLO

June 4, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

Re: Colorado Airspace Initiative - Draft Environmental Impact Statement

Dear Program Manager:

At the onset of the Colorado Airspace Initiative (CAI) proposal, the Colorado Catholic Conference spoke to issues of concern and recommended that an Environmental Impact Statement be done. I am on the Board of Governors of the Conference along with my fellow Colorado bishops.

I would like to comment on the Draft Environmental Impact Statement (DEIS) just released. As the bishop of the region of Colorado in which the activity of the CAI is proposed, I have a keen interest and a responsibility to speak to the well being of the people and that land in this region.

The Concerns of the People of the Area

As a pastoral leader I particularly support the concerns of the people in the affected areas. The community groups, including the Custer County Action Association and the Open Space Alliance, have local contact with people and know their region better than any others. The questions and concerns that they express are important to me. I ask that their questions be answered fully and their concerns addressed. I also would like an answer as to whether their questions and concerns will be addressed. 1

In addition, there are some particular concerns about the DEIS that seem most glaring to me that I know are also concerns of the people of the region:

Noise

- The DEIS is flawed in its study and analysis of noise to the point of being without credibility. This is one of the more egregious errors. It affects the impact on the environment and the quality of life, the two of which are not unrelated.

- First, the DEIS uses the FICON standard for communities which are around airports for judging annoyance. Considering the rural and wilderness character of the areas impacted, we fail to understand how this can be justified. The noise needed to annoy a person accustomed to a fairly high level of noise in an urban airport community on a continuous basis is not remotely the same as a person living in, or visiting, a very quiet rural and/or wilderness area. The contrast or difference of the noise is what would be 2

RESPONSES TO COMMENTS

Response to Comment No.1

The ANG cares about the people that live near their training areas and how they feel about the activity associated with training. The NEPA process is providing the ANG with an opportunity to hear exactly what the public feels about its proposal before any decisions are made. Every scoping comment and every comment on the Draft EIS sent to the ANG has been read and incorporated into the administrative record for the proposal. Public comments have provided a better picture of what subjects the public wanted addressed in the document and have enabled the ANG to improve the EIS by adding or expanding to discussions in the Final EIS. Examples of added or expanded discussions include human health effects, natural quiet, environmental justice, amongst others.

Response to Comment No.2

The approach used in the EIS has been modified. The Federal Interagency Committee on Noise (FICON), representing a variety of Federal agencies with a mix of concerns associated with aircraft noise, reviewed aircraft noise analyses issues in 1992. This committee's report (FICON 1992) continued an approach to evaluating relative impacts associated with aircraft noise that has been recognized by noise analysis experts as the most widely endorsed and comprehensive approach to aircraft noise analysis available. This approach to noise analysis was incorporated into the analyses associated with the Draft EIS. In general, Federal land use compatibility criteria are derivatives of guidelines first devised for land near airports. All land use compatibility is based on the use of Day-Night Average Sound Level (abbreviated as DNL or Ldn) as the descriptor representing community noise environments. The criteria treat areas below DNL 65 dB as compatible for all uses, including residential, and they treat DNL 65 dB as a threshold for significant exposure. There is no generally accepted method for treating rural areas differently for these purposes.

However, many EIS reviewers, including some members of the Federal regulatory community, felt the application of the FICON standards, and the 65 dB threshold, to a rural setting was inappropriate for such areas with more quiet ambient noise conditions. Consequently, the use of the 65 dB threshold as the sole means to assess relative impacts or the acceptability of noise levels associated with aircraft operations addressed in the EIS has been modified and the analysis now includes additional information to evaluate potential impacts.

most striking, the disturbance most intrusive and jarring. With this method, how can the DEIS be viewed as serious or credible?

- Second, the DEIS uses "day-night averaging." Note, if the FICON standard says that 65 decibels is annoying in an airport community, 65 decibels would be far more annoying to a rural community, probably even more so to the wilderness wildlife. According to the day-night averaging method, a plane could produce 150 decibels several times in a day, be "averaged" to below 65 decibels over 24 hours, and hence be deemed not annoying. This is fundamentally flawed. It is also fundamentally deceptive. 3

- Third, the DEIS says that the MOA's will be used by several types of aircraft, yet only the quieter F-16 was used to calculate sound levels. This is another flaw.

- The DEIS failed to address noise adequately and must be viewed as insufficient. 4

Impact on the Environment

- The findings of "No Significant Impact" in the DEIS is insufficiently supported by data and sound analysis according to the community groups.

- The DEIS fails to include an Environmental Justice section as required by Executive Order No. 12898. The review of income figures for the areas in comparison to other areas is not adequately taken into account. As teachers in the Catholic tradition, we have a particular concern here, so much so that the United States Catholic Conference (USCC) now has an Environmental Justice Program. Detriments to the environment are almost always borne by the lower income communities. 5

- Impacts to air quality, health and safety, hazardous material release, species, etc. are deemed "negligible" or "insignificant," without thorough consideration of study.

- The noise issue has not been dealt with adequately as noted above. 6

Impact on the Quality of Life and on the Nature and Identity of Religious or Spiritual Centers

- The apparent inadequate analysis of noise alone fails to take into account the change in the rural nature of the area, the "trust," if you will, that residents of the rural communities, and visitors to the wilderness and national parks have in expecting quiet. Religious retreat centers and spiritual centers will be affected at a fundamental level. They are precisely there in part for the quiet. People frequent them, in part, for the quiet. In our society, we are too often driven by forces that do not take into account the need for quiet, attention to creation, and the spiritual hunger for the contemplative. The impact of the preferred alternative on these important features of the area is not taken into account. When the local economy is also tied inextricably into these features, the need for such consideration is further supported. 7

- The area in question is pristine. The water, the wildlife, the mountains, the air, the small communities, are precious resources. The economy is also tied closely to these. Again the economic impacts to the communities in question do not get adequate hearing in the DEIS. 8

Further Comments on the DEIS

- The DEIS fails to account for cumulative impacts. 9

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RESPONSES TO COMMENTS

Response to Comment No.3

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

Response to Comment No.4

Noise analysis accounted for all aircraft types which will use the airspace.

Response to Comment No.5

A discussion on environmental justice has been added to the Final EIS. This new discussion may be found in Subsection 4.19. The concept of environmental justice addresses the issue of determining if actions of Federal agencies disproportionally impact the human health and environmental conditions in minority communities and low-income communities. The majority of the airspace associated with the alternatives addressed in the EIS has been in existence for many years and the changes being proposed would not significantly alter the current configuration. Environmental justice issues would be more relevant for new airspace, which occurs primarily in the southeastern portion of the State of Colorado. This new airspace does not affect any single minority group and overlies a wide variety of socioeconomic conditions.

Response to Comment No.6

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.7

The EIS has evaluated cultural resources, such as historic or Native American sites, by consulting with the appropriate state representatives and local experts to obtain an understanding of the resources present in the study area and to determine whether any possible impacts exist. Some religious and/or meditation centers are under existing airspace. Consequently, the elimination of VR-412 and the changes to VR-413 under the Preferred Alternative, which raises the minimum altitude from surface level to 500 feet above ground level and reduces the route width from 12 miles to 6 miles, should be beneficial to such locations.

Response to Comment No.8

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.9

Cumulative impacts are included throughout the analyses. Appendix N in Volume II presents cumulative sortie computation upon which the various analyses done for the EIS are based.

- The DEIS fails to give serious analysis to other alternatives, including a "No Action" alternative and one that involves a new range area. } 10
- Many concerns brought up in the scoping sessions have not been addressed. } 11
- No adequate rationale is demonstrated for the proposed action. } 12

Again, the local community groups better represent the people who reside on the land in question. I defer to them on the more technical matters and consider their own evaluation of the impact on their area.

After due consideration, my conclusion remains the same as that of my colleagues as I stated earlier. That position was that "we call on government policy makers to ensure that the Colorado Airspace Initiative is not implemented." } 13

I submit these comments with sincerity and prayer.

Respectfully yours,

(Most Reverend) Arthur N. Tafoya
Bishop of Pueblo

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RESPONSES TO COMMENTS

Response to Comment No.10

The use of other training areas was examined as part of the development of the alternatives studied in detail in the EIS in Subsection 2.3. The proposal was designed to minimize conflicts with potentially sensitive areas while providing the training resources necessary to meet military readiness requirements. Specific narrowing criteria for the selection of military training airspace (see Subsection 2.3.3 in Volume I) were used to evaluate other locations, and no alternative training areas were identified that could be substituted for the airspace configuration proposed in the alternatives studied in the EIS.

The primary user of the airspace included in the Colorado Airspace Initiative is the 140 WG based at Buckley Air National Guard Base in Aurora, Colorado. Because of limited resources and aeronautical constraints, virtually all of our nation's fighter units train in airspace that is within a "tank of gas" of the aircrews' base.

Response to Comment No.11

All comments received during the scoping process associated with this EIS were considered in the preparation of the document. Such comments, as they relate to the proposal, have helped to improve the EIS process and have become a part of the administrative record for the proposal.

Response to Comment No.12

The need for the Colorado Airspace Initiative is presented in Subsection 1.3 of the EIS.

Response to Comment No.13

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

SHIPPED JUN 0 6 1996

Program Manager CAIES

Dear Sirs

I hope you will accept this letter my self taken time to reach me in Florida. The reason I am here most of the year until I can move to Colorado full time is that my home in South Jersey was in the flight area of McGuire Air Force base and flights have increased on a weekly basis and forest fires from local users have occured often in the pine barrens. If you continue to blast Colorado with your jets where is left for a retired person to go for

1

RESPONSES TO COMMENTS

Response to Comment No. 1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

the pain and guilt
we all are entitled to -
I chose this area to
live because it is
everyone who builds here
agrees to do so without
changing the natural
qualities of the water air
and land or demands
upon destruction sets the
area disregards all of
natures gifts

Thank You for your time

Robert Vescuti

Written Comment Form

SHIPPED JUN 0 5 1996

ENVIRONMENTAL IMPACT STATEMENT FOR THE COLORADO AIRSPACE INITIATIVE

If you would prefer to submit written comments on the DEIS, please use this form. Continue on the back of the form or attach extra sheets, as necessary. Thank you.

NAME: Michael Gamer

TITLE/ORGANIZATION: Photographer

ADDRESS: 118 Scrub Oak Rd (Street) Westcliffe, CO 81252 (City/State/Zip)

701

– COMMENTS –

I am dismayed at the whitewash given the CAI by this EIS. The ambient noise in Custer County is well below that of a community near an airport. In fact, the silence is one of the main attractions the Wet Mountain valley has to offer retirees, outdoor enthusiasts and religious practitioners. The gyrations you have gone through in pretending to quantify the startling effect of a low-level fly over are ridiculous. 1

No monitors were located in the Wilderness Area to see how much impact you might have on wildlife. In fact, your only tests on animals were on domesticated herds. How about bears, mountain lions, bobcats and other wild animals? 2, 3

In addition to noise, I am worried about safety. Each time an F16 crashes - a frequent occurence - I wonder if that would ignite a forest fire in the drought-stricken Sangre de Cristo mountains. Or how about flares ... or fuel dumping? 4, 5

If the frequency of use were to remain at the level of the last two years, we could make some concessions to your needs, but no increase in volume is acceptable to the community, as the testimony given in Westcliffe on 5/16 will corroborate. You have no right to take our airspace from us against our will. You are infringing on our freedom in the name of protecting it. Do not adopt this plan! 6, 7

Please hand this form to the staff, drop into the collection box, or mail to:

Program Manager, CAI EIS
Environmental Division
Air National Guard Readiness Center/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

Response to Comment No.1

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Response to Comment No.2

The "Bison Study" presented in Appendix J was intended simply to observe the reactions of the bison to low-altitude F-16 overflights and to determine if a herd stampede was likely to occur. This observational study was accomplished at the request of certain members of the Citizen's Working Group. Members of this Working Group were invited to participate in the observations. In addition, several media representatives were present to observe the overflights. The observational study was never intended to evaluate other behavioral or physiological reactions of bison to aircraft overflights. The EIS authors relied on other existing published studies based on more detailed scientific methodologies to provide information on various other behavioral or physiological reactions of animals to aircraft noise.

Response to Comment No.3

Studies conducted on wildlife have shown that numerous wildlife species have the ability to adapt to the presence of man and various man-made sound sources, including jet aircraft noise. While the noise generated from low-altitude military overflights may be initially startling, habituation to jet aircraft noise occurs with most wildlife species. Species-specific responses to low-altitude overflights vary considerably, and responses from individual animals may have the potential to cause injury. However, wildlife populations are usually affected only when a variety of factors work in combination to impact them, including declines or fluctuations in the availability of a food source, habitat destruction or alteration, predation, hunting, trapping, poaching, disease, or inclement weather, rather than noise alone. Normally, it would be unrealistic to predict or attribute any wildlife population declines to a single stressor, such as noise. In addition, no published scientific evidence was identified that indicated harm may occur to wildlife as a result of exposure to the levels of noise generated by military aircraft that would utilize the airspace associated with the Colorado Airspace Initiative.

Response to Comment No.4

The 140 WG of the Colorado Air National Guard has been flying F-16 aircraft since January 1992. In this time, one aircraft crash has occurred for the 140 WG. This crash occurred in Wyoming in November 1993 while conducting training operations on Instrument Route (IR) 416.

The overall safety record for all F-16 aircraft in the USAF inventory is calculated as the number of mishaps (crashes) per 100,000 hours of flight time. This calculation is done for each government fiscal year (FY). The average mishap rate from FY 1990-1994 for F-16 aircraft was 4.47 mishaps per 100,000 hours of flight. The 140 WG of the Colorado Air National Guard currently flies approximately 3,600 hours per year in the F-16, not all of it in airspace associated with the Colorado Airspace Initiative. Multiplying the 3,600 hours of flight time by the 140 WG to the mishap rate of 4.47 per 100,000 hours for the F-16 aircraft overall gives a total of 0.161 mishaps in one year. This total equates to one F-16 aircraft crash every 6.2 years for all operations by the 140 WG. Currently, the 140 WG spends approximately 75 percent of its flight time in airspace associated with the Colorado Airspace Initiative.

The potential for fire associated with military aircraft operations, including the use of flares, is discussed in detail in EIS Sections 3.1.3 and 4.3.1.

Response to Comment No.5

Fuel dumping by aircraft using the CAI airspace is not anticipated. In addition, the F-16 aircraft is not capable of dumping fuel.

Response to Comment No.6

The frequency of training flights that have been observed by the public represent normal operations needed to fulfill USAF training requirements.

Response to Comment No.7

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

8 Heaton Place
Pueblo, CO 81001
5 June 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

To Whom It May Concern:

The DEIS you produced is poorly written , suffers from some major omissions, is largely flawed, and was not worth the funds you wasted on it. As a resident of Custer and Pueblo Counties in the affected area of proposed Air National Guard activities I am stunned by the direction our military leaders appear to headed. By implementing this planned Colorado Airspace Initiative you will in effect " be destroying the very thing you should be preserving." It is obvious from reading your document that the Colorado National Guard does not need any of this airspace to satisfactorily complete training proficiency. What this initiative demonstrates is there is a desire for "convenience" in pilot training so they can do it close to the Denver area. Yet, this airspace will be used by National Guard units from **outside** Colorado. Why? The DEIS does not explain this aspect fully. 1

Another major problem with the DEIS is the lack of complete data describing the exhaust emissions from aircraft. What are many of the exhaust components? You list six criteria on p. 3-11 (ozone to lead); however, on p. 4-185 to 4-205 you only discuss four citeria. We know there are many complex organic compounds produced by jet engines. Why have you chosen to ignore them, their potential toxicities, and impacts? 2

All of this pilot training could be most efficiently done using existing federal sites in Nevada, New Mexico, and California. There is no demonstrated need for this airspace proposal. 3

The mix of high decibel levels in a rural tranquil region close to wilderness is unacceptable. I have and will continue to study the alpine lake ecosytems of southern Colorado. The sound from low flying aircraft in mountainous terrain is at the very least unsettling to mammalian wildlife and stressful to humans. The choice of location for this airspace training site is totally inappropriate. 4

Again, let me remind you that what you think you are protecting you might be destroying. Before that happens, reconsider the consequences. A whole different mind set and protocol are needed before the Colorado Airspace Initiative DEIS becomes acceptable.

Sincerely,
Scott J. Herrmann
Scott J. Herrmann, Ph.D.
SJH

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RESPONSES TO COMMENTS

Response to Comment No.1

The 140 WG, like all Air National Guard and Air Force F-16 units, performs a majority of their training within 200 miles of their home locations. This is a direct result of defense spending cutbacks. Units that fly within the airspace have been identified and are shown in Appendix E.

Response to Comment No.2

In Section 4.8.1.2, the reference for the source of emission data is shown as USAF 1992a. A new reference has been included in the Final EIS text (SEA 1996) which provides complete data input and output for the computer model, including emission factors for the aircraft using CAI. The air pollutant emissions from aircraft are presented in the reference USAF 1992a and the new reference SEA 1996.

The listed air pollutants in Table 3-3 are not criteria, but standards as discussed in the text of Section 3.1.8. The four criteria established by EPA and the state used to compare the effects of aircraft in the airspace segments are listed in Table 3-4 of the EIS.

Jet engines do not produce complex organic compounds.

No air emission impacts or potential toxicity were ignored. A reduction in the aircraft flight time from 5005 hours to 4600 hours will produce a proportionate reduction in the total air pollution emissions.

Response to Comment No.3

The use of other training areas was examined as part of the development of the alternatives studied in detail in the EIS in Subsection 2.3. The proposal was designed to minimize conflicts with potentially sensitive areas while providing the training resources necessary to meet military readiness requirements. Specific narrowing criteria for the selection of military training airspace (see Subsection 2.3.3 in Volume I) were used to evaluate other locations, and no alternative training areas were identified that could be substituted for the airspace configuration proposed in the alternatives studied in the EIS.

The primary user of the airspace included in the Colorado Airspace Initiative is the 140 WG based at Buckley Air National Guard Base in Aurora, Colorado. Because of limited resources and aeronautical constraints, virtually all of our nation's fighter units train in airspace that is within a "tank of gas" of the aircrews' base.

Response to Comment No.4

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

1723 Van Diest
Colorado Springs, CO 80915
719-591-2695
05 June 1996

Air National Guard Readiness Center
Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews Air Force Base, MD 20762-5157

Subject: Colorado Airspace Initiative.

Reference:

1. Air National Guard, National Guard Bureau, Draft Environmental Impact Statement for the Colorado Airspace Initiative, Volume I - Impact Analyses, and Volume II - Appendices, March 1996.

2. Letter To: Air National Guard Readiness Center, From: Marvin E. Hollar, Subject: Lack of Calibrated Test Equipment for the Colorado Air Initiative, Dated 21 May 1996.

The following comments are provided by 05 JUN 96 to meet the deadline required by reference 1.

Five of the seventeen noise measurement sites of reference 1 are in Custer County. These are site numbers 08, 09, 10, 11, and 15. Sites 08, 09, and 15 are in the upper end of the Texas Creek drainage area, while sites 10 and 11 are in the upper end of the Grape Creek drainage area which is considered to be the Wet Mountain Valley. No measurements were made on the floor of the Wet Mountain Valley. No measurements were made in the winter when a layer of cold air can refract and intensify sounds. The results of the noise measurements are presented in Table H4 on Page H-20 of reference 1. Sites 08, 09, 11 and 15 have Energy-Equivalent Sound Levels from 44 to 48 dB. Site 10 is in the same vicinity as site 11 yet it has a measurement which is 17 dB higher than site 11. This 17 dB error at site 10 is not explained in the text. Therefore the data from site 10 should be discarded! Custer County then has the lowest ambient noise within the Colorado Airspace Initiative study area. This is why the citizens of Custer County are annoyed by overflights and are objecting to the Colorado Airspace Initiative. They have chosen to live in this area for its quality of life consisting of audible serenity and visual beauty. They will not give up these assets easily nor should they without a declared war. Therefore there should be no Military Training Route (MTR) or Military Operations Area (MOA) in the airspace over Custer County. The existing MTRs and MOAs in the airspace over Custer County should be eliminated. The Colorado Air National Guard by their own criteria should be looking for an area with an ambient background noise level of 65 dB or greater to mask their aircraft noise. 1

Specific comments are as follows:

Page 2 - 11, Paragraph 2.2.7, All Visual Routes (VRs) should be eliminated. Human accuracy cannot maintain the corridor width. This applies to VR-412, VR-413, and the proposed XVR-1427. The Instrument Routes (IRs) provide access to the MOAs. The VRs are not needed.

Page 2 - 43, Paragraph 2.3.3.3, Cost data should be provided to support the following statements:
a. "The ANG saves money by using facilities like Buckley that it already owns. If the Colorado ANG's 140 WG were to vacate Buckley, it would need to relocate and become a tenant at a commercial aviation facility or at another DOD base, thus incurring significant costs and expending other resources."
b. "Ultimately, retention of the Buckley ANG Base, the 140 WG, and the Colorado ANG as a whole is an economical and practical decision." 2

Page 2-48, Paragraph 2.6.1.1, states:

263L Marvin E. Hollar

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RESPONSES TO COMMENTS

Response to Comment No.1

Measurement sites were chosen to include noise-sensitive areas, and were selected in coordination with local citizen groups. The month long monitoring period provided a representative sample; variations due to seasonal weather changes are not expected to be significant.

All data presented in Appendix H were collected from instruments which were operating properly, as determined by data content and field calibration during each service visit. There is no objective reason to discard data from Site 10.

Response to Comment No.2

Regardless of the route designation (visual or instrument), the 140 WG flies all routes under visual flight rule conditions. Also, routes are required under Federal Aviation Administration rules for military aircraft flying in excess of 250 knots.

Based upon recent experience of relocating entire units, the cost for new buildings and to relocate personnel/equipment would be approximately $105 million. This does not include land, cleanup of the existing base including hazardous material sites and other like costs.

Response to Comment No.3

The computer programs were developed under Air Force sponsorship, and are distributed by the Air Force for use in Department of Defense noise studies. References to these documents have been added to the EIS and are included in the text of the Final EIS.

The programs were customized by incorporation of data from dedicated noise measurements. Those measurements and incorporation of the data are described in Appendix I.

Response to Comment No.4

Military training airspace called ATCAAs (Air Traffic Control Assigned Airspace) also exist above 18,000 feet mean sea level. For LaVeta MOA, this airspace is called Chama ATCAA and is scheduled in conjunction with the LaVeta MOA.

a. "Computer-based simulation programs are normally used to determine the noise impacts associated with changes in aircraft operations and to model the expected noise environment. These programs have been approved for this purpose by the Department of Defense." This Environmental Imact Statement should reference the document that gives this approval.
b. "The computer programs and modeling functions have been calibrated using direct measurements of the noise environment for typical aircraft operations. Two special studies were conducted for the Colorado Airspace Initiative to customize the computer programs and their effectiveness in modeling the alternatives studied in this EIS." These computer programs should be described. This description should define how the computer programs were customized for this EIS. -3

Page 3 - 46, Figure 3 - 9, This figure shows that the Greenhorn Mountain Wilderness Area is in the middle of the La Veta MOA. Greenhorn Mountain has an elevation of 12,347 feet. If the aircraft maintain 2,000 feet Above Ground Level (AGL) over wilderness areas that leaves only 3,653 feet to the top of the MOA at 18,000 feet. The maneuver altitude over the Sangre de Christo Wilderness is even less at 1,706 feet. This MOA does not provide sufficient vertical space to practice combat maneuvers with modern fighter aircraft. -4

Page 4 - 93, Table 4 - 47, For the existing alternative, describe how the Cheyenne High can have a higher noise level (53 dB) than the Cheyenne Low (44 dB). Sound is attenuated with distance. The same comment applies to the La Veta and Two Buttes MOAs. -5

Page G - 8, Paragraph G.1.3, A document describing the "NOISEMAP" and the "ROUTEMAP" programs should be referenced. -6

Page H - 8, Paragraph H.5, The noise measurements should present the raw data before any adjustments such as (a) the frequency response and sensitivity of the human ear (Audible-Weighted or A-Weighted), (b) the Day-Night Average Sound Level, and/or (c) the Onset-Rate Adjusted Day-Night Average Sound Level. -7

Page H - 10, Figures H - 2 through H - 18, The text should define Leq and describe how it is calculated. -8

Page H - 20, Table H4, The text describes the noise monitoring test as lasting 30 days. This table shows that most of the sites provided significantly less than 30 days of data although three sites provided slightly more than 30 days of data. The average time for all sites was 82% for the 30 day period. This does not speak well for the reliability of the test instrumentation which should be at least 99%. The lack of calibration of this test equipment was addressed in a previous correspondence (reference 2). Is the column labeled "DNL" the same as Leq? The text should describe the relationship between these two terms, if any. -9

Page I - 3 through I - 9, Tables 4 through 16, The text should define "GROUND TO GROUND". How can there be a ground-to-ground noise with an airspeed ranging from 450 to 610 knots? The ground-to-ground numbers may be applicable at airports but has nothing to do with noise in Military Training Routes or Military Operations Areas. If these numbers are not applicable to this study they should be deleted. -10

Page I - 4, Table 6, "Low-CRU" should be defined in the text and in the List of Abbreviations and Acronyms.

Marvin E. Hollar

Marvin E. Hollar

cc:

The Honorable Roy Romer
Room 136
State Capitol Building
Denver, CO 80203

707

RESPONSES TO COMMENTS

Response to Comment No.5

Calculated noise levels account for numbers and types of operations, aircraft types, and the altitude distribution of operations. The resultant noise levels do not have a simple relationship with any one quantity, but account for all of these factors.

Response to Comment No.6

The NOISEMAP and ROUTEMAP documents are cited in the text of Subsection 4.4.

Response to Comment No.7

The instruments used apply A-weighting prior to processing.

Response to Comment No.8

Leq is described in Appendix G. The standards document containing its mathematical definition is cited.

Response to Comment No.9

It is common for unattended outdoor noise monitoring equipment to experience downtime. This can occur because of weather conditions, animal activity, and other factors. The 82 percent operating time is typical for this type of effort.

All instrumentation was calibrated by certified technicians before the measurements, and during measurements was field calibrated as detailed in Appendix H.

DNL and Ldn are both abbreviations for Day-Night Average Sound Level.

Response to Comment No.10

Tables 4 through 16 are reproduced directly from NOISEMAP output. The text in the Final EIS has been modified to identify "air-to-ground" as the relevant data.

The caption for Table 6 has been changed in the Final EIS to "..Low-Cruise..". The term "Low-CRU" is an abbreviation used in the computer print-out, and is not a standard nomenclature.

P. MITCHELL MYERS
1636 LOMBARD ST.
CAÑON CITY, CO. 81212

JUNE 5, 1996

PROGRAM MANAGER CAI EIS
ANG RC/CEVP
3500 FETCHET AVENUE
ANDREWS A.F.B. MD. 20762-5157

GENTLEMEN

I HAVE OWNED A 340 ACRE RANCH CALLED "THE BROKEN BOARD RANCH" 349 COUNTY RD 277 (TOP OF OAK CREEK GRADE) FOR 20 PLUS YEARS. I AM NOW RETIRED, LIVING IN CAÑON CITY, AND ABOUT TO SUBDIVIDE THIS LAND. I KNOW FROM PERSONAL EXPERIENCE, GROWING UP ON USAF AIR BASES, WHAT IMPACT FIGHTER AIR PLANES CREATE! MY FATHER COL USAF RET. FLEW ALL THE CENTURY SERIES FIGHTERS. 1

I SUPPORT OUR ARMED FORCES NEEDS FOR STAYIN' COMBAT READY. IN THAT FT. CARSON HAS THE SECONS LARGEST COMBAT PRACTICE RANGE IN THE UNITED STATES, IT SEEMS THE USE OF THE WET VALLE ONLY 25 AIR MILES AWAY IS NOT A CRITICAL NEED AND IN FACT REDUNDANT! 2

SINCERELY P. Mitchell Myers

708

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

Under the Preferred Alternative in the Draft EIS, all low-altitude flights (below 5,000 feet above ground level) will cease in the Wet Mountain Valley.

709

Southern Rockies Ecosystem Project
Upper Arkansas and South Platte Project
from the headwaters to the plains

June 5, 1996

Program Manager, CAI EIS
ACGRC/CEVP
3500 Fetchett Ave.
Andrews AFB, MD 20762-5157

Re: Colorado Airspace Initiative DEIS

Thank you for the opportunity to comment on the above DEIS. The following is submitted on behalf of the Upper Arkansas and South Platte Project (UASPP).

UASPP has 75 volunteer field workers who are surveying roadless areas in the two watersheds, including areas affected by the CAI in the Pikes Peak, Wet Mountains and southern Sangre de Cristos areas. We consider these to be prime candidates for potential protected core reserves which will preserve native biodiverstiy and help prevent the further decline of habitat and species in our area.

1. The finding of "no significant impact" from activities associated with Airburst MOA and LaVeta MOA is incomprehensible to us. Low altitude flights over any habitat, including National Forests, BLM Wilderness Study Areas, Wildernesses, Parks, Monuments and Wildlife Refuges disrupt the solitude and quiet. This is stressful for wildlife, to say nothing of people. 1

2. Day-night averaging is an unacceptable means of assessing impact of noise. The problem is not the average, the problem is the maximum noise and the frequency of noise. 2

3. The 65 decibel used as a standard is ridiculous. If this is the level used to judge annoying intrusion o communities located next to a commercial airport, then clearly a much lower standard must be used to asses wildlife "annoyance." 3

4. It appears that all the evidence which would suggest that these areas are not suitable for Colorado Air National Guard training flights has been discounted. We find this highly objectionable. 4

We request the elimination of Airbust MOA, LaVeta Moa, VR-413 and all MTRs leading to Airburst Range. 5

Sincerely

Jean C. Smith

Jean C. Smith
Coordinator

cc: Colorado Airspace Alliance
Gov. Roy Romer

Jean C. Smith, 1308 St. Paul , Denver CO 80206 (303) 388-3378 Fax: same, call first Email jean.smith@rmc.sierraclub.org
Coordinator

RESPONSES TO COMMENTS

Response to Comment No.1

The ANG adheres to its "Policy on Air National Guard Overflights of Designated Wilderness and Wild and Scenic Rivers," as presented in Appendix L. This policy is intended to protect specifically identified areas, such as the Sangre de Cristo and Greenhorn Mountain Wilderness Areas, by limiting training operations to no lower than 2,000 feet above ground level whenever possible unless safety of the flight or operational parameters (e.g., weather conditions) may be compromised.

Studies conducted on wildlife have shown that numerous wildlife species have the ability to adapt to the presence of man and various man-made sound sources, including jet aircraft noise. While the noise generated from low-altitude military overflights may be initially startling, habituation to jet aircraft noise occurs with most wildlife species. Species-specific responses to low-altitude overflights vary considerably, and responses from individual animals may have the potential to cause injury. However, wildlife populations are usually affected only when a variety of factors work in combination to impact them, including declines or fluctuations in the availability of a food source, habitat destruction or alteration, predation, hunting, trapping, poaching, disease, or inclement weather, rather than noise alone. Normally, it would be unrealistic to predict or attribute any wildlife population declines to a single stressor, such as noise. In addition, no published scientific evidence was identified that indicated harm may occur to wildlife as a result of exposure to the levels of noise generated by military aircraft that would utilize the airspace associated with the Colorado Airspace Initiative.

Response to Comment No.2

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

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Response to Comment No.3

The approach used in the EIS has been modified. The Federal Interagency Committee on Noise (FICON), representing a variety of Federal agencies with a mix of concerns associated with aircraft noise, reviewed aircraft noise analyses issues in 1992. This committee's report (FICON 1992) continued an approach to evaluating relative impacts associated with aircraft noise that has been recognized by noise analysis experts as the most widely endorsed and comprehensive approach to aircraft noise analysis available. This approach to noise analysis was incorporated into the analyses associated with the Draft EIS. In general, Federal land use compatibility criteria are derivatives of guidelines first devised for land near airports. All land use compatibility is based on the use of Day-Night Average Sound Level (abbreviated as DNL or Ldn) as the descriptor representing community noise environments. The criteria treat areas below DNL 65 dB as compatible for all uses, including residential, and they treat DNL 65 dB as a threshold for significant exposure. There is no generally accepted method for treating rural areas differently for these purposes.

However, many EIS reviewers, including some members of the Federal regulatory community, felt the application of the FICON standards, and the 65 dB threshold, to a rural setting was inappropriate for such areas with more quiet ambient noise conditions. Consequently, the use of the 65 dB threshold as the sole means to assess relative impacts or the acceptability of noise levels associated with aircraft operations addressed in the EIS has been modified and the analysis now includes additional information to evaluate potential impacts.

Response to Comment No.4

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.5

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

RESPONSE TO THE DRAFT ENVIRONMENTAL IMPACT STATEMENT
OF THE COLORADO AIRSPACE INITATIVE

by the Town of Bonanza

SHIPPED JUN 0 5 1996

The members of the Town Board, representing the majority opinion of the residents of Bonanza, find that the Colorado Airspace Initiative DEIS presents insufficient evidence for the finding of "NO signifient impact" on wildlife or our human population.

Bonanza, located in a narrow valley between vertical mountains, owes its recently trippled population to the values of peace and quiet that make it unique, and an abundance of wildlife. This area is presently experiencing a long drought that presents extreem fire danger to the region.

The DEIS does not present convincing evidence that MOA would not create a danger from sparks or a crash. The evidence of No signifient impact on the calving grounds of deer, elk and bighorn sheep, the routes of migratory songbirds, the valleys flocks of cranes and geese, or protected raptors is not based on explicit information, careful research and satisfactory evidence. The startle effect of a low flying military aircraft booming over one of our ridges with amplified adustics caused by this terrain would be severly upsetting to humans. The effect on wildlife with their vastly more sensative hearing and inability to comprehend the source would be devestating. The DEIS does nothing to convince us that there would be no signifieant impact, so relying on common sense and experience, we conclude that the effects of low flying military aircraft would be devestating to the Rio Grande National Forest, the SangreDe Cristo and the Greenhorn Mountain Wilderness areas. The NEGATIVE impact on the underlying human population, economically, mantally and in quality of life would be detremental.

There have been strong protests and opposition to MOAs in this region of impact which do not seem to have been fairly addressed in the DEIS, including the concerns expressed by the Colorado Division of Wildlife, and we conclude that our protest will be brushed aside as merely another FONSI. But for the record, we want to send a loud and very definate MESSAGE: NO VR413 -NO La Vita MOA - NO Bonanza MOA!

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Town of Bonanza
#20 Bonanza
Villa Grove, CO 81155

Gail C Holbrook - MAYOR
Richard F Becker
Mark A Parkinson
Ann Hindmeyer Treas.
Stephen McNeese
Edgar L Carpenter

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RESPONSES TO COMMENTS

Response to Comment No.1

The F-16 aircraft and other aircraft associated with the CAI do not emit sparks during normal flight operations.

The 140 WG of the Colorado Air National Guard has been flying F-16 aircraft since January 1992. In this time, one aircraft crash has occurred for the 140 WG. This crash occurred in Wyoming in November 1993 while conducting training operations on Instrument Route (IR) 416.

The overall safety record for all F-16 aircraft in the USAF inventory is calculated as the number of mishaps (crashes) per 100,000 hours of flight time. This calculation is done for each government fiscal year (FY). The average mishap rate from FY 1990-1994 for F-16 aircraft was 4.47 mishaps per 100,000 hours of flight. The 140 WG of the Colorado Air National Guard currently flies approximately 3,600 hours per year in the F-16, not all of it in airspace associated with the Colorado Airspace Initiative. Multiplying the 3,600 hours of flight time by the 140 WG to the mishap rate of 4.47 per 100,000 hours for the F-16 aircraft overall gives a total of 0.161 mishaps in one year. This total equates to one F-16 aircraft crash every 6.2 years for all operations by the 140 WG. Currently, the 140 WG spends approximately 75 percent of its flight time in airspace associated with the Colorado Airspace Initiative.

Response to Comment No.2

The research completed to support the preparation of the CAI EIS follows the use of various accepted scientific methodologies used to analyze pertinent potential impacts. These analyses have been prepared by qualified scientists and engineers who perform these services for a variety of customers, including the ANG.

Response to Comment No.3

The "surprise" or "startle" effect of the rapid onset rate of military aircraft noise has been accounted for, with penalties of up to 11 dB applied. See Subsection G.1.2.4.

Response to Comment No.4

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

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Response to Comment No.5

The ANG cares about the people that live near their training areas and how they feel about the activity associated with training. The NEPA process is providing the ANG with an opportunity to hear exactly what the public feels about its proposal before any decisions are made. Every scoping comment and every comment on the Draft EIS sent to the ANG has been read and incorporated into the administrative record for the proposal. Public comments have provided a better picture of what subjects the public wanted addressed in the document and have enabled the ANG to improve the EIS by adding or expanding to discussions in the Final EIS. Examples of added or expanded discussions include human health effects, natural quiet, environmental justice, amongst others.

Response to Comment No.6

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

State Senator
GINETTE "GIGI" DENNIS

June 7, 1996

Dear David,

Thank you for the consideration to extend the public review period of the Colorado Airspace Initiative.

I believe our national security is priority one for the U.S. and the training is very important. However, since a citizens panel w/ Nat'l guard input was formed, I hope some of their suggestions are carefully reviewed.

Sincerely,

Gigi Dennis

1

RESPONSES TO COMMENTS

Response to Comment No. 1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

2671 Ginette Dennis

June 9, 1996

The Honorable Bill Clinton
President of the United States
The White House
Washington, D.C. 20500

Dear President Clinton,

I want to tell you of my opposition to the Colorado Airspace Initiative. I have read the Environmental Impact Statement produced by the Air Force and the Air National Guard Readiness Center. While I am not a trained airspace planner, it is very clear to me that both the Air Force and the Air National Guard have established evaluation criteria which dramatically favor the proposals that they want implemented. In order to minimize non-training flying time and flight costs, they simply refuse to consider airspace in other nearby areas. 1

I am very interested in protecting the rural areas near Crestone from the proposed tremendous increase in the number of sorties, noise, low level training missions and lack of meaningful limitation on such low level flights which will result if the preferred alternative is implemented. The impacts are not at all minimal to the people who live in and visit the area. The Air National Guard should either use existing airspace in other nearby areas or switch to aircraft with less intrusive operational characteristics and which are better suited to the geographic and demographic realities of their State. 2 3

I hope that you can help me in this matter. Please let me know what you position on this matter is and what you can do about it. Thank you for your help in this matter. I look forward to hearing from you in the near future.

Sincerely,

Joel Mandel

Joel Mandel
2550 Sycamore Lane, Apartment 5 B
Davis, CA 95616

c: Air National Guard Readiness Center
Program Manager, CAI EIS
ANGRC/CEVP
350 Fetchet Avenue
Andrews Air Force Base, MD 20762-5157

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

Military training route VR-413 is an existing airspace currently used for training. Under the Preferred Alternative, its width would be reduced in size to 6 miles. This would significantly reduce the land area under this airspace and would move its eastern boundary away from the Sangre de Cristo Mountains and the Great Sand Dunes National Monument. In addition, its turn point near Mount Blanca would be moved further south. The minimum altitude would be raised from surface to 500 feet above ground level.

Response to Comment No.3

The use of other training areas was examined as part of the development of the alternatives studied in detail in the EIS in Subsection 2.3. The proposal was designed to minimize conflicts with potentially sensitive areas while providing the training resources necessary to meet military readiness requirements. Specific narrowing criteria for the selection of military training airspace (see Subsection 2.3.3 in Volume I) were used to evaluate other locations, and no alternative training areas were identified that could be substituted for the airspace configuration proposed in the alternatives studied in the EIS.

The primary user of the airspace included in the Colorado Airspace Initiative is the 140 WG based at Buckley Air National Guard Base in Aurora, Colorado. Because of limited resources and aeronautical constraints, virtually all of our nation's fighter units train in airspace that is within a "tank of gas" of the aircrews' base.

Written Comment Form

SHIPPED JUN 10 1996

ENVIRONMENTAL IMPACT STATEMENT FOR THE COLORADO AIRSPACE INITIATIVE

If you would prefer to submit written comments on the DEIS, please use this form. Continue on the back of the form or attach extra sheets, as necessary. Thank you.

NAME: R. David and Peggy J. Zehring

TITLE/ORGANIZATION: Old La Veta Pass - Historic Places Registry

ADDRESS: PO Box 967 (Street) La Veta, CO 81055 (City/State/Zip)

– COMMENTS –

Old La Veta Pass is an historic, narrow gauge railway ghost town. We own it and 300 acres that we are in the process of restoring as a stress-free resort for people who enjoy visiting America's historic places.

However, if the Colorado Airspace Initiative (CAI), sponsored by Colorado's Air National Guard, is adopted, we will abandon our plans and join the growing number of irate local citizens who feel the requirements of the National Environmental Protection Act have been ignored. The public is supposed to be legally informed, have access to documents and sufficient time to respond to any project of this magnitude. 1 2

If necessary, the Final Enviromental Impact Statement (EIS) will be legally challenged by us - the citizens such statements are designed to protect. There are alternatives. Please investigate them before approving this destructive proposal. 3

Please hand this form to the staff, drop into the collection box, or mail to:

Program Manager, CAI EIS
Environmental Division
Air National Guard Readiness Center/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

716

RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

The Council on Environmental Quality provides guidelines for the preparation of Environmental Impact Statements, and the review of EISs by the public and various government agencies. These guidelines direct agencies to "allow not less than 45 days for comments on draft statements" (Section 1506.10 of these guidelines). The comment period for the CAI Draft EIS officially opened March 29, 1996 with the Notice of Availability published in the Federal Register. The initial mailing of the statement to over 750 addressees was accomplished on March 20, 1996 prior to the NOA. The close of the comment period was initially published as June 5, 1996 (68 days), and then extended to July 12, 1996 (105 days).

Response to Comment No.3

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

717

June 3, 96

To: Our National Guard,

We strongly object to the Colorado Airspace Initiative.

The impact of sudden, loud noise in a quiet natural setting will be detrimental to the area. It is a Lose/Lose Situation.

The Day-night averaging of noise in our valley is ridiculous. 1

We want the elimination of Airburst MOA, La Veta MOA and all MTR's leading to the Airburst Range. 2

Melissa M. Kovtynovich

Sincerely

Bart C and Debra M. Kovtynovich

1205 21st Lane

Pueblo Co. 81006

(719)543-4755

RESPONSES TO COMMENTS

Response to Comment No.1

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

Response to Comment No.2

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

The Colorado College
Environmental Science Program

Comments on the Colorado Airspace Initiative Draft Environmental Impact Statement

June 15, 1996

The following comments were prepared by Dr. Val Veirs, Professor of Physics and Director of the Environmental Science Program at Colorado College and by Rachel Conn, student research assistant and Environmental Science:Biology major.

The core of our comments are addressed to the inadequacy of the Draft EIS' review of the impacts of aircraft noise on wilderness and backcountry visitors. Our report is divided into the following eleven sections and contains arguments to support the following 5 conclusions:

Report Outline

1. The importance of Wilderness
2. Natural Quiet is a critical wilderness value.
3. Wilderness areas are within several of the proposed Military Operations Areas and under several of the proposed Military Training Routes.
4. A wide variety of users frequent these Wilderness Areas and Wilderness Study Areas.
5 The Colorado Airspace Initiative is in direct violation of The Wilderness Act of 1964 (Public Law 88-577) and of The 1987 Aircraft Overflights Act (Public Law 100-91).
6. The methodology used to predict annoyance of wilderness visitors is faulty.
7. Aircraft noise causes significant reduction in quality of backcountry wilderness experiences.
8. La Veta MOA and Fremont Airburst A MOA and VR413 MTR all severely impact wilderness areas and wilderness study areas.
9. The 2,000 foot minimum altitude over Wilderness Areas is not adequate.
10. Our recommendation for protection of wilderness values in Wilderness Areas and Wilderness Study Areas.
11. Our requests for the Final Environmental Impact Statement.

Summary of Recommendations and Requests for the Final Environmental Impact Statement.

1. We request that the Final EIS study deleting the La Veta and Airburst A MOA's and the VR413 MTR, to protect Natural Quiet.

2. We request that the Final EIS study implementing the 5 and 10 nautical mile distance limitations outlined in this paper to protect natural quiet.

3. We request that the ANG follow their own policy on overflights over Wilderness Areas.

4. Because the 2,000 foot minimum is not adequate, we request that the Final EIS study implementing at least a three thousand foot minimum height restriction over the highest Wilderness Area elevation to protect wilderness visitors and wildlife from startle noise.

5. If the Final EIS contains any low-level (less than 3,000 feet above highest elevation) flights over Wilderness Areas or Wilderness Study Areas, we request that the Air National Guard carry out a detailed analysis of wilderness visitors assessment of natural quiet and startle noise and the impact of military overflights on wilderness visitor's experience with a full justification of the rationale and justification coordinated with the federal land managers of the impacted wilderness areas and wilderness study areas. This is to develop an appropriate metric to replace the faulty urban noise survey that was missapplied in the DEIS and to implement Air National Guard policies.

This report is also available on the World Wide Web at http://environment.cc.colorado.edu

14 East Cache La Poudre Street, Colorado Springs, Colorado 80903-3298 • 719-389-6965 • Fax 719-389-6929
E-mail: evs@proxima.cc.colorado.edu

RESPONSES TO COMMENTS

Response to Comment No. 1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

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The Importance of Wilderness

Wilderness is a key cornerstone, an observatory, from which we Americans can view the inter-relationships between nature and our technological civilization. We need society and we need solitude. We need machines and we need untrammeled nature. Machines and technology direct where we are going and nature tells us where we have come from. As Katherine Lee Bates wrote from Colorado College, we need "*the purple mountain's majesty above the fruited plain*".

Supreme Court Justice William O. Douglas wrote "*We can have the road and a stretch of wilderness both.*" (National Parks Magazine pg. 8) This duality lies at the heart of our landuse philosophy which focuses on development in some areas and preservation in others. Wilderness exists now only as islands in a growing sea of urbanization and technological control.

2 Silence is fast becoming extinct in this county even in areas that have been set aside as national parks, forest and wilderness areas. To hear only the sounds of nature, uninterrupted by the roar of machines is essential for nourishing the soul. By filling the world with human-made sounds, the room for contemplation and for developing relationships with the natural world is destroyed. In silence there is a space created that is a holding place for spirituality, creativity and growth. In destroying these few remaining places of quiet with the loud jarring sound of jets zooming by overhead, often at low altitudes, we are destroying an important natural resource that nourishes us all. We are eliminating the possibility of wildness and wilderness and destroying any balance between development and nature.

This is not a new idea or concern. John Muir spoke passionately crying "*In wildness is the preservation of the world*".

Natural Quiet is a critical wilderness value.

Natural Quiet is a rich and meaningful quality that is hard to find even in National Parks and Wilderness Areas. Natural Quiet must be protected if we are to have any left in the future. If we keep on destroying it at the rate that we are now our children will not know what it is like to hear the quiet of the woods on a windless day or the sound of a mountain creek without the moment being shattered by humanmade noises.

3 The National Park Service has long maintained that Natural Quiet is an essential park resource. In their Report to Congress on the issue of overflights they state how intangible qualities, such as silence, are important aspects of parks. " *Just as parks contain many tangible features, such as animals, plants, waters, geological features, historic buildings and archeological sites, they have intangible qualities as well. These qualities include solitude, space, scenery, clear night skies, sounds of nature and natural quiet. Such intangible qualities are important components of visitor's overall enjoyment of parks, and are thus valued resources" (NPS* Report pg. 9-10) Aircraft overflights endanger many of these intangible qualities and are thus an impact on visitor's enjoyment of parks and wilderness.

The National Park Service found in their Visitor Survey that enjoying natural quiet is about as important as viewing natural scenery as a reason for visiting national parks. At a 95% confidence level, enjoying natural quiet was a reason for visiting an area for between 88.3% and 93.1% of visitors. The percent of visitors that visited an area to view natural scenery was only slightly higher. At a 95% confidence level, between 91.3% and 95.1% of visitors visited an area to view natural scenery. (NPS Report pg. 16-17)

Park settings and wilderness areas can often provide a level of natural quiet that is so quiet that no sound can be heard except for the sounds made by the listener themselves. That is to say all that a person can hear is the sound of themselves breathing and walking. (NPS Report pg. 10) This level of natural quiet is jeopardized by the Colorado Airspace Initiative.

A number of Wilderness Areas as well as other areas that have high backcountry use are within several of the proposed Military Operations Areas and under several of the proposed Military Training Routes.

The La Veta MOA, which is located in the Sangre De Cristo and the Wet Mountains of Southern Colorado will impact thousands of backcountry users each year.. Located in the La Veta MOA are two Wilderness areas, the Sangre De Cristo Wilderness Area and the Greenhorn Mountain Wilderness Area. Most of the San Isabel National Forest is also located under the La Veta MOA. See Figure 1. There are seven Fourteeners (mountains of 14,000 feet or higher) located within ten nautical miles of the Proposed Alternative La Veta MOA. Greenhorn Mountain, 12,349', is located in the La Veta MOA in the Greenhorn Wilderness Area. 4

The Proposed Alternative suggested in the DEIS for the Colorado Airspace Initiative would expand the Original Proposal's La Veta MOA to include even more of the Sangre De Cristo Wilderness Area. See note and arrow in Figure 1.

RESPONSES TO COMMENTS

Response to Comment No.2

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

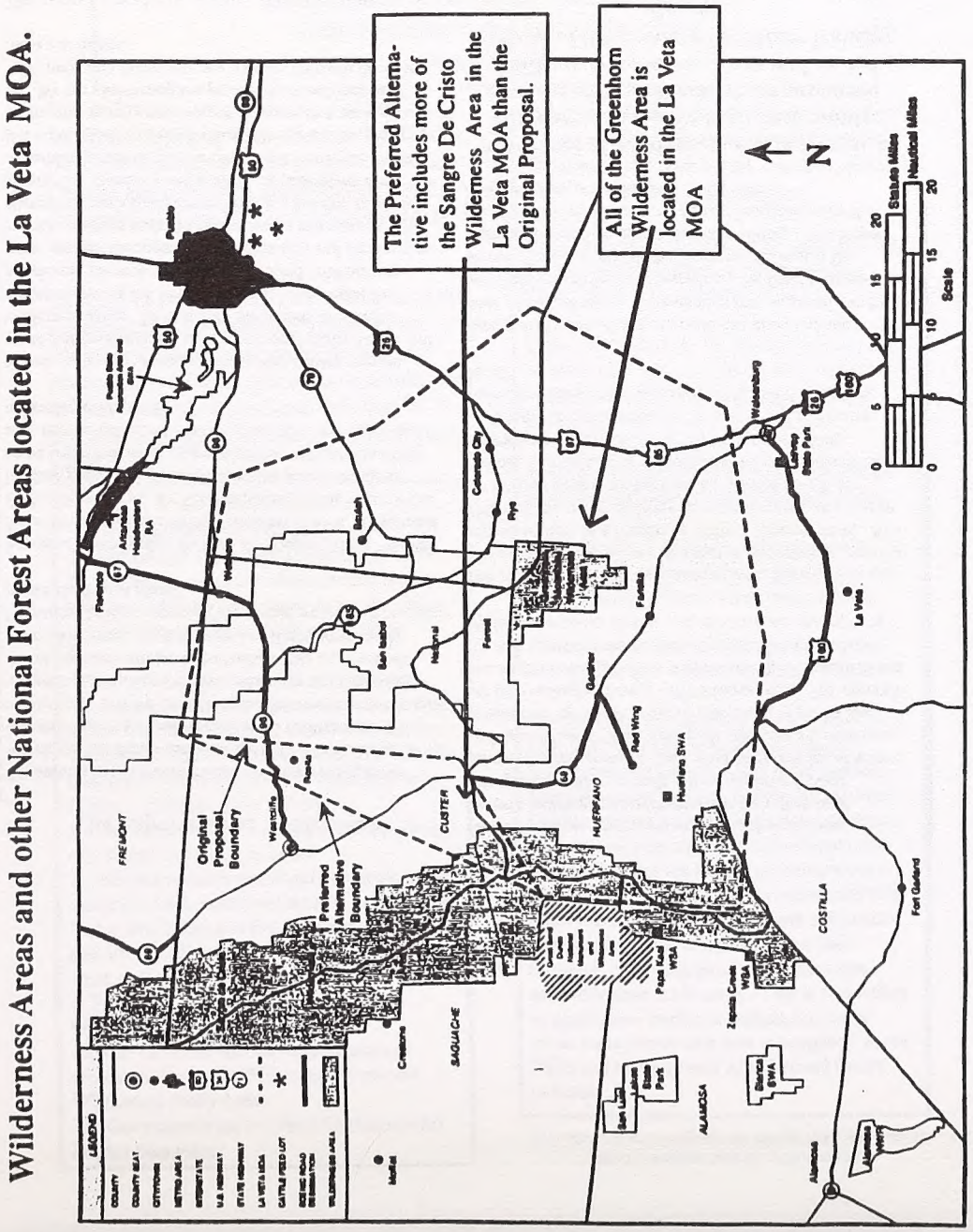
Response to Comment No.3

The concept of natural quiet as a resource has been added to the Final EIS. This new discussion may be found in Subsection 4.14.

Response to Comment No.4

Under the Preferred Alternative, there would be no changes to La Veta MOA.

Figure 1: Wilderness Areas and National Forest Areas located in the La Veta MOA



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The VR413 MTR corridor covers the northern portion of the Sangre de Cristo Wilderness Area as well as covering the Florissant Fossil Beds, Mueller State Park and abutting the Great Sand Dunes National Monument. Finally, the Fremont Airburst A MOA covers the Beaver Creek Wilderness Study Area and Aiken Canyon. Beaver Creek is a wilderness with known nesting sites for Mexican Spotted Owls and for peregrine falcons. Aiken Canyon is "*one of the largest known high-quality foothills ecosystems along the Front Range*" (The Nature Conservancy).

5, 6

A wide variety of users frequent these Wilderness Areas and Wilderness Study Areas.

The Forest Service has just completed a study of backcountry use of the Wilderness Areas and other National Forest areas by drainage basin and they estimate that about 11,000 people use backcountry areas located in the La Veta MOA each year. About 2,000 of these people are visiting Wilderness Areas and around 9,000 people are visiting other areas in the San Isabel National Forest. (Forest Service Analysis)

7

There are a number of groups who use these areas on a consistent and repeating basis. The Colorado College has a campus located in Crestone Colorado which is close to the La Veta MOA. Between 1600 and 1800 Colorado College students use this facility each year. Many of these students hike and camp in the surrounding wilderness, which is located under the La Veta MOA. Peace and quiet is essential for many of the classes that are offered at this southern campus. Many field biology classes visit this campus and go out into the surrounding wilderness to view wildlife and study animal behavior and habitat. The sudden loud noise of a jet overhead startles animals and makes it hard to view them in their natural state. The Colorado Airspace Initiative jeopardizes the integrity of many of these students experience and education while they are at the campus in Crestone.

8

The Colorado College also has a freshmen orientation program called FOOT which takes incoming students on five day camping trips in the Colorado Wilderness. The Outdoor Recreation Club at Colorado College runs many year round wilderness trips in this area as well. These two organizations take a total of 200 or more students a year to backcountry areas located under the La Veta MOA.(Leisure Program) These programs are an integral part of a Colorado College student's education and college experience and both of these experiences are impacted by the Colorado Airspace Initiative.

Outward Bound, an organization that leads wilderness trips, is impacted as well by the Colorado Airspace Initiative. They lead trips in area located in the La Veta MOA. They run 5 courses a year in this area. In each course there are about 4 groups and in these group there are about 12 people. This is a total of a 240 people per year who take an outward bound course in the area of Colorado located in the La Veta MOA.(Outward Bound) An important aspect of the Outward Bound program is the Solo experience in which every member of participates. The Solo is a time when participants experience the natural world in solitude. It is a time for meditation and self exploration. Being out on a Solo and having a loud jet fly overhead could be very startling and disturbing and would be a significant interruption of the experience.

9

The Great Sand Dunes National Monument is surrounded

Forest Service estimates of backcountry visitors in the La Veta MOA per year by drainage basin.

Sangre De Cristo Wilderness Area

Drainage	Number of People per Year
S. Cottonwood Creek	100
Muddy Creek	100
Mt. Zwischen	10
Lower Huerfano	390
Dutch Creek	152
Slide Mountain	50
Total =	802

Greenhorn Wilderness Area

Drainage	Number of People per Year
Greenhorn	1,200

San Isabel National Forest

Drainage	Number of People per Year
Locke Adobe	900
Hardscrabble	300
Babcock	900
Ophir	300
Squirrel Creek	2,000
San Carlos	900
St. Charles	3,000
Williams Creek	600
Black Mountain	200
Total =	9,100

Great Sand Dunes National Monument

Area	Number of People per Year*
Great Sand Dunes	293,366

*The average number of backcountry and non-backcountry visitors per year from the years 1991-1993.

RESPONSES TO COMMENTS

Response to Comment No.5

Military training route VR-413 is an existing airspace currently used for training. Under the Preferred Alternative, its width would be reduced in size to 6 miles. This would significantly reduce the land area under this airspace and would move its eastern boundary away from the Sangre de Cristo Mountains and the Great Sand Dunes National Monument. In addition, its turn point near Mount Blanca would be moved further south. The minimum altitude would be raised from surface to 500 feet above ground level.

Response to Comment No.6

The ANG adheres to its "Policy on Air National Guard Overflights of Designated Wilderness and Wild and Scenic Rivers," as presented in Appendix L. This policy is intended to protect specifically identified areas, such as the Sangre de Cristo and Greenhorn Mountain Wilderness Areas, by limiting training operations to no lower than 2,000 feet above ground level whenever possible unless safety of the flight or operational parameters (e.g., weather conditions) may be compromised.

Response to Comment No.7

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.8

There would be some changes in sortie numbers, noise levels, and airspace dimensions under the Original Proposal and the Preferred Alternative addressed in the EIS. However, overall flying hours of the 140 WG will be reduced from 5005 hours to 4600 hours. When compared to existing military aircraft training in the study area, these changes would not change the current levels of solitude and peace and quiet experienced by residents. As under current conditions, noise from military aircraft operations may periodically disturb citizens and affect their enjoyment of solitude; however, opportunities for abundant periods of total peace and quiet would continue as under present conditions.

Response to Comment No.9

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

by airspace. The VR-413 boundaries have been moved west to avoid The Great National Sand Dunes in the Preferred Alternative which is a definite improvement from the Existing Conditions. However the full length of the eastern border of the Great Sand Dunes is lined by the La Veta MOA. Approximately 200,000 visitors or more visit the Sand Dunes each year.(NPS Statistical Data) When standing near the eastern border of the Sand Dunes jets could potentially be flying almost directly overhead. The noise from jets flying in the La Veta MOA will most definitely be able to be heard throughout the whole Sand Dunes National Monument.

The impact that the Colorado Airspace Initiative will have on all of the people mentioned above is not addressed in the DEIS. The DEIS comes to the conclusion that *"no unavoidable adverse impacts would be expected"* in the La Veta MOA without taking into account the many adverse impacts that this proposal will have on the 11,000 back-country users, the 2,000 Colorado College Students, the hundreds of thousands of visitors to the Great National Sand Dunes National Monument, and the many partici-pants in programs such as Outward Bound.

The Colorado Airspace Initiative is in direct violation of Public law 88-577 (The Wilder-ness Act of 1964) and of Public law 100-91 (The 1987 Aircraft Overflights Act)

Wilderness Areas under The Wilderness Act of 1964 are subject to meet the following conditions *"to have been primarily affected by the forces of nature, with the imprint of man's work substantially unnoticed; and [to have] outstanding opportunities for solitude or a primitive and unconfined type of recreation."* (Public Law 88-577). As mentioned before, part of the Sangre De Cristo and all of the Greenhorn Wilderness Areas are located in the La Veta MOA. Aircraft overflights of these Wilderness Areas jeopardizes the condition stated above of having the *"imprint of man's work substantially unnoticed."* Aircraft overflights also eliminate the possibility for visitors to find *"opportunities for solitude or a primitive and unconfined type of recreation."*

10

The 1987 Aircraft Overflights Act requires the National Park Service and the Forest Service to specify what are acceptable levels of overflights in federal wilderness areas. Nowhere in the DEIS does it mention that the National Park Service or the Forest Service has reviewed the DEIS alternatives and found that the DEIS alterna-tives present acceptable levels of overflights over the affected Wilderness Areas. The 2,000 feet or higher minimum is the FAA's suggestion not the National Park Service's or the Forest Service's.

11

The methodology used to predict annoy-ance of wilderness visitors is faulty.

The DEIS uses Day-Night Average Sound Levels with onset-rate adjustment in concert with community noise annoyance survey results in their attempt to evaluate the effects of aircraft noise. This procedure is doomed to failure when applied to wilderness values and wilderness travellers. Neither the effects on wildlife nor the annoy-ance of backpackers can be estimated using the Air National Guard's approach.

12

Wildlife may startle at the onset of a very loud noise superimposed upon a nearly silent background. Nesting birds may panic and flush from their nests and crush the eggs of their unborn young. Animals that are already stressed metabolically may waste crucial reservoirs of energy when startled by low-level jet flights. Wilderness backpackers certainly register strong annoyance when their backcountry trip is punctuated by loud and startling aircraft noise and surveys have shown that even the distant sound of aircraft is annoying when it obliterates the natural sounds of wind and water and birds and insects. The startling effect of loud aircraft noise can be dangerous to backcountry users, the noise could cause mountain climbers or rockclimbers to loose their footing or grip and could potentially cause serious injuries.

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None of these impacts are measured by the DEIS's approach of applying community annoyance standards to 24-hour day-night average noise levels. The DEIS shows that their technique is inappropriate in wilderness situations when they claim *"Speech interference associ-ated with aircraft noise is a primary cause of annoyance to individuals on the ground."* (DEIS pg. G-11) Speech interference is critical to someone sitting on their patio in a city or a suburb. This is NOT the primary cause of backcountry environmental impacts.

16

The Air National Guard must carry out a noise study that is appropriate to assess the environmental impacts of their activities on Wilderness Areas and upon Wilderness Study Areas.

17

RESPONSES TO COMMENTS

Response to Comment No. 10

The ANG adheres to its "Policy on Air National Guard Overflights of Designated Wilderness and Wild and Scenic Rivers," as presented in Appendix L. This policy is intended to protect specifically identified areas, such as the Sangre de Cristo and Greenhorn Mountain Wilderness Areas, by limiting training operations to no lower than 2,000 feet above ground level whenever possible unless safety of the flight or operational parameters (e.g., weather conditions) may be compromised.

Response to Comment No. 11 *(ANG RESPONSE)*

The ANG is the only DOD agency that adheres, through written policy, to the FAA recommended altitude of 2,000 feet above ground level over federally designated wilderness areas.

Response to Comment No.12

The approach used in the EIS has been modified. The Federal Interagency Committee on Noise (FICON), representing a variety of Federal agencies with a mix of concerns associated with aircraft noise, reviewed aircraft noise analyses issues in 1992. This committee's report (FICON 1992) continued an approach to evaluating relative impacts associated with aircraft noise that has been recognized by noise analysis experts as the most widely endorsed and comprehensive approach to aircraft noise analysis available. This approach to noise analysis was incorporated into the analyses associated with the Draft EIS. In general, Federal land use compatibility criteria are derivatives of guidelines first devised for land near airports. All land use compatibility is based on the use of Day-Night Average Sound Level (abbreviated as DNL or Ldn) as the descriptor representing community noise environments. The criteria treat areas below DNL 65 dB as compatible for all uses, including residential, and they treat DNL 65 dB as a threshold for significant exposure. There is no generally accepted method for treating rural areas differently for these purposes.

However, many EIS reviewers, including some members of the Federal regulatory community, felt the application of the FICON standards, and the 65 dB threshold, to a rural setting was inappropriate for such areas with more quiet ambient noise conditions. Consequently, the use of the 65 dB threshold as the sole means to assess relative impacts or the acceptability of noise levels associated with aircraft operations addressed in the EIS has been modified and the analysis now includes additional information to evaluate potential impacts.

Response to Comment No.13

Studies conducted on wildlife have shown that numerous wildlife species have the ability to adapt to the presence of man and various man-made sound sources, including jet aircraft noise. While the noise generated from low-altitude military overflights may be initially startling, habituation to jet aircraft noise occurs with most wildlife species. Species-specific responses to low-altitude overflights vary considerably, and responses from individual animals may have the potential to cause injury. However, wildlife populations are usually affected only when a variety of factors work in combination to impact them, including declines or fluctuations in the availability of a food source, habitat destruction or alteration, predation, hunting, trapping, poaching, disease, or inclement weather, rather than noise alone. Normally, it would be unrealistic to predict or attribute any wildlife population declines to a single stressor, such as noise. In addition, no published scientific evidence was identified that indicated harm may occur to wildlife as a result of exposure to the levels of noise generated by military aircraft that would utilize the airspace associated with the Colorado Airspace Initiative.

Response to Comment No.14

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.15

No documented reports of injury resulting specifically from aircraft noise to any persons participating in these recreational activities in mountainous areas have been reported.

Response to Comment No.16

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

Response to Comment No.17

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.18

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Aircraft noise causes significant reduction in quality of backcountry wilderness experiences.

The National Park Service has carried out extensive surveys of backcountry users reactions to aircraft noise. These studies have focussed on high level commercial jets and upon low level sight-seeing trips via helicopter and small tour propeller planes. The National Park Service has proved that aircraft noise causes a significant reduction in backcountry wilderness experience. They found that from 5% to 90% of backcountry users will express moderate to extreme annoyance due to air craft noise in a park environment, with 37% expressing annoyance when the aircraft sound level reached $L_{eq,1hr}$ = 40 dB (NPS Report pg. 146). Certainly even higher levels of annoyance are to be expected from the exceptional loudness of low-level military jets.

In a study that addresses visitor evaluations of aircraft over Wilderness Areas it was found that visitor evaluations of overflights are multidimensional, and though visitor annoyance was high in regard to overflights, visitor's solitude and tranquility were even more affected. (Tarrant et al pg. 351) This is important when addressing The Wilderness Act of 1964 because of the significant effect overflights are proven to have on solitude. And as stated above The Wilderness Act of 1964 states that Wilderness Areas should provide "*outstanding opportunities for solitude*" (Public Law 88-577)

On page 4-35 of the DEIS it states that " *potential impacts to issues and concerns related to aesthetics.... are difficult to determine due to the subjective nature of this resource*" Yet in the NPS's Visitor Survey they addressed one aspect of aesthetics and overflights, the issue of the effect of seeing aircraft on visitor annoyance. They found that visitors were negatively affected by seeing aircraft overflights. (NPS Report pg. 136 and Tarrant et al pg. 357)

18

On page 4-113 the DEIS states that "*potential impacts would generally be negligible*" to visual resources and aesthetics over "*sensitive land use receptors*" (i.e. Wilderness). One of the reasons that is used to support this conclusion is that other non-military aircraft fly through the ROIs and thus the military jets will not be altering the visual landscape all that much. Yet non-military aircraft rarely if ever fly as low as proposed by the Air National Guard and thus low flying military jets could have significant impact of visual resources and aesthetics. In addition to that there has been research that shows that military airflights are rated as more of a problem in wilderness than any other type of aircraft. (Tarrant et al. pg. 353)

19

Recreation motives affect visitor evaluation of aircraft overflights. Visitors that place a large emphasis on observing and enjoying nature and experiencing solitude are more likely to evaluate airflights more negatively than visitors with other recreation motives. (Tarrant et al. pg. 352) Backcountry visitors to wilderness areas have these recreation motives and therefore evaluate aircraft overflights negatively.

20

Wilderness users with more past experience in wilderness surroundings, experience overflights more negatively than users with low experience. (Tarrant et al. pg. 352) Less accessible sites attract visitors that are more sensitive to overflights then other visitors. (NPS Report pg. 147) Backcountry users fall under both of these categories and are therefore be more sensitive to aircraft overflights.

The Generic Environmental Impact Statement for The Air Force Low Altitude Flying Operations States that low altitude flights impact wilderness in two main ways. 1- through an "*intrusion that violates a sense of isolation from the influences of industrialized society*" and 2- through "*intrusions that interfere directly with recreation*" (Air Force pg.4-54) Here the generic impact statement for the Air Force is admitting that Wilderness Areas are impacted by aircraft overflights yet the ANG still says in their DEIS that there will be "no significant impacts"

21

The Generic Environmental Impact Statement also states that overflights can effect recreational use of parks and wilderness areas by affecting solitude, serenity, enjoyment of wildlife, perceived safety, hunting and fishing activities, and fulfillment of federal trust responsibilities. (Air Force pg. 4-54)

The importance of solitude is mentioned in the Generic EIS. "*The existence of wilderness is indispensable to recreational solitude because it affords an opportunity to engage in rewarding group interaction that would otherwise be impossible in normal daily life; provides a voluntary means of establishing self-worth in ways not normally allowable in everyday life; affords a unique aesthetic appeal; and through psychological fascination, it provides the chance to escape from the pressures of everyday life and opportunities for self-directed reflection.*"(Air Force pg. 4-55) Why does the ANG's DEIS does not address these impacts that the Generic Environmental Statement states will occur when dealing with military aircraft over Wilderness Areas and other backcountry areas?

22

23

The Air National Guard should take full notice in the Final EIS of the research that has been done to study the environmental impact of aircraft and in addition, the Air National Guard must perform research on the effect of low-level military jet overflights on wilderness backcountry visitors before any finding of "*no significant impact*" can be determined.

24

RESPONSES TO COMMENTS

Response to Comment No.19

Because of the many avenues through which the public has received information on the CAI, including both factual and nonfactual information from various sources, some confusion may exist about the existing airspace and proposed new airspace, particularly for the Wet Mountain Valley and the San Luis Valley. The La Veta MOA is an existing airspace. No changes are proposed for this airspace.

VR-413 is also an existing airspace; however, under the Preferred Alternative, its width would be reduced in size and its eastern boundary moved away from the Sangre de Cristo Mountains. The minimum altitude would be raised from surface level to 500 feet above ground level. VR-412, which is currently a low-altitude route through the Wet Mountain Valley, would be eliminated altogether under the Preferred Alternative, thus eliminating low-altitude training completely from the Wet Mountain Valley. Sorties over the Wet Mountain Valley also are reduced under the Preferred Alternative.

Response to Comment No.20

See response to Comment No. 8.

Response to Comment No.21

See response to Comment No. 19.

Response to Comment No.22

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.23

Under the Preferred Alternative, the maximum number of sorties for the Colorado Airspace Initiative would decrease from 5,441 sorties to 4,909 sorties per year.

Response to Comment No.24

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

726

La Veta MOA and Fremont Airburst A MOA and VR413 MTR all severely impact wilderness areas and wilderness study areas.

As mentioned above, the La Veta MOA extends over the southern portion of the Sangre de Cristo Wilderness Area and completely covers the Greenhorn Mountain Wilderness Area. The VR413 MTR corridor covers the northern portion of the Sangre de Cristo Wilderness Area as well as covering the Florissant Fossil Beds, Mueller State Park and abutting the Great Sand Dunes National Monument. Finally, the Fremont Airburst A MOA covers the Beaver Creek Wilderness Study Area and Aiken Canyon.

nature, you can be assured that 100% of these individuals would be "highly annoyed". Furthermore, wildlife will be stressed by such events.

The startle noise expected in the Sangre de Cristo Wilderness Area and the Greenhorn Mountain Wilderness area due to flights in the La Veta MOA is an unacceptable environmental impact. Similarly, the startle noise expected in the Beaver Creek Wilderness Study Area due to flights in the Fremont A MOA is an unacceptable environmental impact.

Noise measurements carried out by the Air National Guard confirm that rural areas in these MOA's and MTR's are very quiet places. Figure 2 is based on DEIS Figure H-5 and shows typical noise levels near the Colorado College Baca Campus in Crestone, Colorado. 50% of the time, noise levels are less than 40 dB. Such low levels are typical of all the measurements reported in the DEIS.

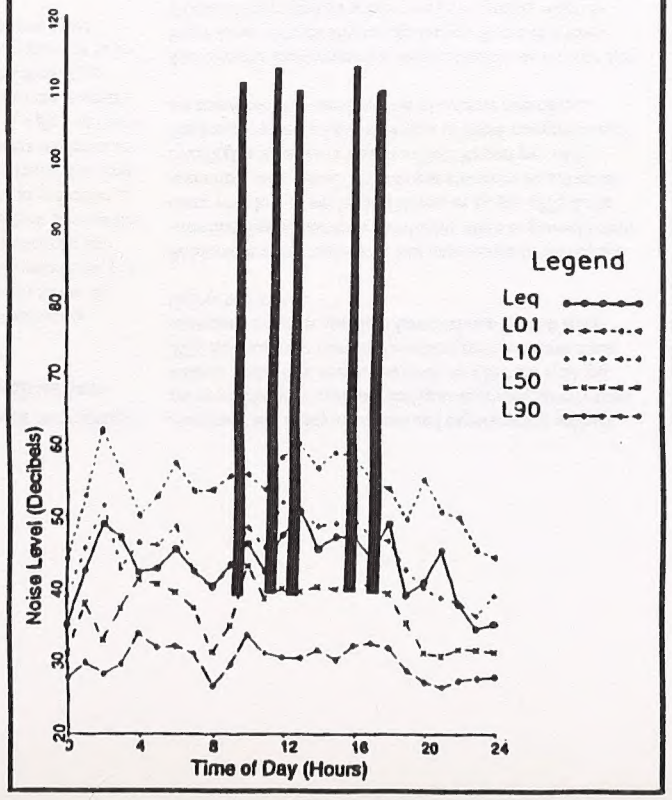
Superimposed on the actual measurements we have placed the noise from five low-level overflights several hundred feet overhead. These five simulated noise events were culled from Table H4 (DEIS, Vol 2, pg. H-22) and represent flights with peak sound levels of Lmax=110 dBA and SEL's of 114 similar to the Exceedance recorded on 1 June 94 and reported in DEIS Table H5.

25

Five flights with SEL's of 114 superimposed on a background of 45 dBA give a day-night average sound level of 72 dBA. Referring to Schultz's "Community Surveys of Noise Annoyance" (DEIS pg. G-8) we see that about 20% are "Highly Annoyed". However, if backcountry travellers were exposed to this noise profile after toiling up a mountain path and stopping to rest and observe wild

Figure 2

Hourly sound levels recorded at Crestone, Colorado (DEIS Figure H-5 pg. H-11) with 5 lowlevel overflights superimposed



RESPONSES TO COMMENTS

Response to Comment No.25

The figure on this page shows low-level overflight noise which, in view of the 2,000 foot minimum altitude over wilderness areas, will not occur. The discussion of this figure and speculation as to individual behavior is not relevant to the alternatives presented in the EIS.

The concept of natural quiet as a resource is, however, relevant. Discussion of natural quiet has been added to the EIS. See new Subsection 4.14.

Natural Quiet is destroyed when aircraft noise intrudes on the natural scene. Natural Quiet will not exist in the Wilderness Areas under consideration in this report. According to the National Park Service, Natural Quiet can be protected if aircraft are prohibited from flying too close to the protected area. Grand Canyon National Park is considering creating "*some areas where aircraft are not audible, but to be effective in restoring natural quiet to large areas, flight-free zones will need to be very large - on the order of 20 to 30 miles, in minimum dimension. ... no reasonable minimum altitude ... can completely restore natural quiet.*" (NPS Report pg. 198)

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Flight operations outlined in the DEIS will seriously degrade the Natural Quiet in Wilderness Areas under the La Veta MOA and the VR413 MTR and in the Beaver Creek Wilderness Study Area under the Fremont Airburst A MOA. In addition, these flights will seriously degrade the Natural Quiet in many National Forest areas, in State Parks and in many other locations that citizens flee to in order to find refuge from the noise of technological society.

727

The 2,000 foot minimum over Wilderness Areas is not adequate

The DEIS states that "*wilderness areas will be overflown by 2,000 AGL or higher, whenever possible.... When conditions make it impossible to overfly a wilderness area by 2,000 AGL, the area is avoided laterally if possible. Therefore potential impacts from reduced noise levels are negligible*" (DEIS pg. 4-36) The DEIS does not specify what conditions make it impossible to overfly a wilderness area by 2,000 AGL. Furthermore, the DEIS does not specify what possibilities might limit lateral avoidance and finally, the DEIS does not specify how often all these (unstated) conditions might occur.

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The 2,000 foot minimum is a FAA recommendation for overflights over wilderness areas. It is not a solution to the impacts that are created by military jet aircraft overflights and should not be treated as such by the DEIS. This 2,000 foot minimum does not ensure that "*noise levels are negligible*". Table 16 in the DEIS (pg. I-9) shows that a F-16 produces 94 dBA sound level exposure at 2,000 feet! This is not negligible in a backcountry environment where the sound levels may be as low as 20 dBA.

28

The 2,000 foot minimum is not high enough to make "*potential impacts from noise levels negligible*" (*DEIS* pg. 4-36) The National Park Service states that by raising the minimum altitude to 2,000 feet some "*egregious impacts*" and "*maybe some complaints*" will be reduced. (NPS Report pg. 181) But raising the altitude to 2,000 feet "*does not effectively restore natural quiet*" (NPS Report pg.181) They also state in same section that "*Not only are the lower altitude aircraft audible, but high altitude jets and the sound levels that they produce are unaffected by such minimun altitudes*" (NPS Report pg. 181) Restriction to a minimum altitude of 2,000 feet will not restore the wilderness experience. The noise that low and high levels jets are producing is going to have a large impact on the backcountry areas located below airspace and the people who use these areas.

The DEIS does not address noise impacts on backcountry areas that are not Wilderness Areas. Almost all of San Isabel National Forest is located in the La Veta MOA. This backcountry area is heavily used by backpackers and hikers. The Forest Service estimates that 9,000 or more people use the backcountry in San Isabel National Forest each year. Does the ANG plan to keep a 2,000 foot minimun over this area as well? What about the impact overflights will have on these backcountry users? As mentioned above, even if there is a 2,000 foot minimun over a backcountry area, there still will be significant impacts to the area.

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Finally, there is nothing magic about the 2,000 foot AGL limitation. The U.S. Navy has agreed to a 3000 foot minimum altitude in noise sensitive areas. (NPS Report pg. 210) This minimum was negotiated to provide some protection for breeding and feeding sites of endangered species such as the northern spotted owl. In this critique, we recommend a minimum elevation of 3,000 feet above the highest point in the region if a backcountry is to be overflown at all.

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Our recommendations for protection of wilderness values in Wilderness Areas and Wilderness Study Areas.

To Protect Natural Quiet: Choose a distance that will reduce aircraft noise to "*acceptable levels*". The National Park Service Report to Congress says 20-30 miles is needed to protect natural quiet.(NPS Report pg. 198) We recommend a less restrictive buffer of 10 nautical miles around Wilderness Areas which will reduce jet noise down to about 50 dBA (DEIS, pg. I-3) We recommend a buffer of 5 nautical miles around Beaver Creek Wilderness Study Area since it does not have full Wilderness Area status. Note that the buffer is limited to less than 5 nautical miles on the southwest of Beaver Creek because of the proximity of Fort Carson. Figure 3 shows these two buffer boundaries. No military flights should be permitted within these buffer regions or over the protected areas within the buffers.

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To Protect from Startle Noise: Assign a minimum height of 3000 feet above the highest terrain as a floor to all military jet operations. This 3000 feet minimum distance between

RESPONSES TO COMMENTS

Response to Comment No.26

The concept of natural quiet as a resource has been added to the Final EIS. This new discussion may be found in Subsection 4.14.

Response to Comment No.27

An example of safety parameters to fly below 2,000 feet above ground could be cloud cover that may occur while an aircraft is on a route to a particular airspace. Seeing the cloud cover, a pilot would normally fly below it, in most instances. An example of operational parameters would be if a flight member had to reposition the aircraft to maintain visual contact while flying in formation.

Because of mountain peak height, airspace boundary or cloud cover, lateral avoidance will be instituted to avoid federally designated wilderness areas in lieu of overflight.

Response to Comment No.28

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.29

The ANG makes every effort to protect designated wilderness areas from aircraft noise. Non-designated areas and general lands under the jurisdiction of the Bureau of Land Management that may be viewed as pristine areas to many citizens carry no special protections from man-made noise sources. Should specific sensitive areas or noise receptors be identified, procedures may be implemented to provide avoidance of aircraft overflights of these areas.

Response to Comment No.30

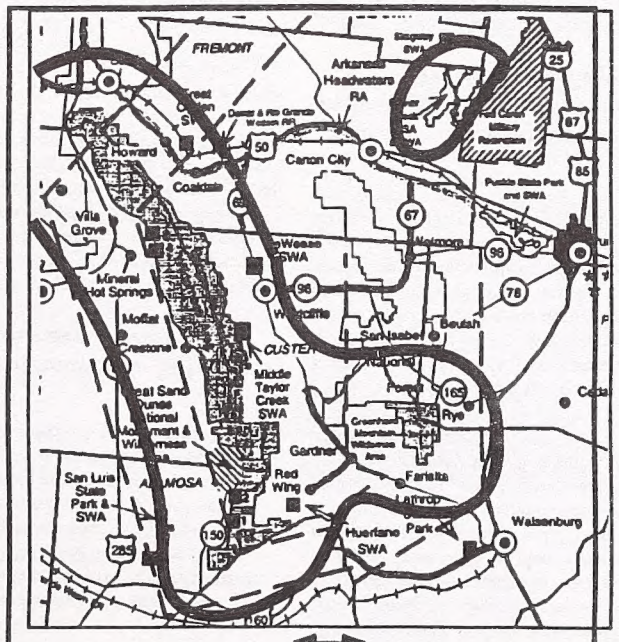
Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.31

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

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Figure 3: Buffers Around Wilderness



10 nautical mile buffer around Sange de Cristo and Greenhorn Wilderness Areas
5 nautical mile buffer around Beaver Creek Wilderness Study Area except as limited by Ft. Carson on the east

wilderness travellers and aircraft will reduce startle noise significantly. Noise levels will drop from about 110 dBA to the high 90's. (DEIS pg. I-3) In addition to reducing the jet's noise, the abruptness of the onset of the sound will also be reduced. This leads to a 17,000 ft. MINIMUM over the entire Sangre de Cristo Wilderness, a 16,000 ft. MINIMUM over Greenhorn Wilderness and a 14,000 ft. MINIMUM over Beaver Creek.

Air National Guard Policy on Overflights

The "Policy on Air National Guard Overflights of Designated Wilderness and Wild and Scenic Sites" (NPS Report pg. 306) states the following Air National Guard policy:

- •1 *"Newly proposed airspace and modification of existing airspace will be planned to avoid these areas unless mission constraints dictate otherwise."*
- •2 *"OARS shall identify the rationale, and provide justification for overflights."*
- •3 *"Wilderness will be overflown at 2000 ft. AGL or higher whenever possible..."*
- •4 *"Newly proposed airspace and modification of existing airspace wil be planned to avoid these areas unless mission constraints dictate otherwise."*
- •5 *"The units will coordinate with the appropriate manager of a Wilderness... This may include defining prohibited areas, altitude above terrain reservations, and areas of partial or seasonal closure.*

32

Why does the Air National Guard not follow their own polices on overflights over wilderness areas? The ANG has deviated from these policies quite a few times in the DEIS. First of all, the modification of the La Veta MOA, that is suggested in the Preferred Alternative, includes more of the Sangre De Cristo Wilderness Area in the MOA. Second, if the Air National Guard were following it's policies, the La Veta MOA would not even exist. Also, It is not evident in the DEIS that the ANG has followed their fifth policy of coordinating with the appropriate wilderness managers.

RESPONSES TO COMMENTS

Response to Comment No.32

Under the Preferred Alternative, there would be no changes to La Veta MOA.

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Our requests for the Final Environmental Impact Statement.

1. We request that the Final EIS study deleting the La Veta and Airburst A MOA's and the VR413 MTR, to protect Natural Quiet and to implement the first ANG policy quoted above.

2. We request that the Final EIS study implementing the 5 and 10 nautical mile distance limitations outlined above to protect Natural Quiet and to implement the first ANG policy quoted above.

3. We request that the Final EIS study implementing the minimum height restrictions outlined above to protect wilderness visitors and wildlife from startle noise and to implement the third ANG policy quoted above modified by accepting the Navy's 3000 ft. minimum.

4. If the Final EIS contains any low-level flights over Wilderness Areas or Wilderness Study Areas, we request that the Air National Guard carry out a detailed analysis of wilderness visitors assessment of natural quiet and startle noise and the impact of military overflights on wilderness visitor's experience with a full justification of rationale and justification coordinated with the federal land managers of the impacted wilderness areas and wilderness study areas This is to develop an appropriate metric to replace the faulty urban noise survey that was misapplied in the Draft EIS and to implement ANG policies 2 and 5 quoted above .

33

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1990 "Generic Environmental Impact Statement for Air Force Low Altitude Flying Operations"

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Tarrant, Michael A., Hass, Glenn E. and Manfredo, Micheal A.
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RESPONSES TO COMMENTS

Response to Comment No.33

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

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June 28, 1996

To: Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrew AFB, MD 20762-5157

From: Glenn Ennis, Private Citizen
5467 Blackhawk Road
Boulder, CO 80303-4009

Re: Written Comments on the Draft Environmental Impact Statement for the Colorado Airspace Initiative

Reviewer Background

I have lived in Colorado for 21 years and ran my first environmental project 26 years ago. More importantly, I have worked as an environmental professional fully dedicated to improved safety and environmental compliance at federal facilities. I wrote sections of the new environmental impact statement for Rocky Flats and I trained in risk assessment at the Harvard School of Public Health. I have commented to the FAA as a professional reviewer and I have reviewed aircraft crash probabilities and other hazards as part of my work for the Los Alamos National Laboratory. With this professional background I hope that my comments will be taken seriously and that the Colorado Air National Guard and other authorities will honor these recommendations.

Comments

1. **Questionable Contract Award**: There appear to have been irregularities with respect to the contract award for private-sector support on this project. What now amounts to a multi-year sole-source contract was not let through a competitive bid process. Many companies have the technical capability to perform this work to a high professional standard and should have been provided the opportunity to do so.
Recommendation: The General Accounting Office (GAO) should prepare an audit of the contract award process to determine if the contract award was illegal or improper. Secondly, the GAO should determine if expenditures to date are valid. Thirdly, a determination should be made as to whether funds required to prepare and present the Final Environmental Impact Statement (FEIS) in fiscal 1997 or beyond should now be subject to competitive bid. — 1

2. **Failure to Analyze the Purpose and Need for Action, Part I**: Two reasons are put forward in an effort to demonstrate the purpose and need for requesting proposed modifications to the National Airspace System. First is the modernization of the F-16 fighter aircraft. According to F-16 manufacturer publications, two significant features of the modernized F-16 aircraft are improved night-flight capability and in-flight refueling capability. However, the DEIS fails to analyze the impacts of either of these modifications. Are we to believe that commanders will not want to train their pilots in *all* capabilities of the modernized F-16? There is no reason to think that a commander would not want to refuel his force while in a Military Operations Area (MOA) and then proceed to fly additional Military Training Routes (MTRs) and engage in additional maneuvers. Indeed, one would *expect* that this would occur, resulting in multiple flybys per sortie and consequent understatement of all impacts presented in this DEIS. — 2

RESPONSES TO COMMENTS

Response to Comment No.1

All contractors that prepare environmental studies for the ANG are selected through competitive procurements in accordance with the Federal Acquisition Regulations (FAR), including the firms associated with this EIS: Science and Engineering Associates, Inc.; National Security Analysts, Inc.; and Wyle Laboratories.

Response to Comment No.2

Under the Preferred Alternative, the maximum number of sorties for the Colorado Airspace Initiative would decrease from 5,441 sorties to 4,909 sorties per year.

The number of flying hours assigned to a unit is determined by the amount of funding that a unit receives. In general, in-flight refueling activities associated with the Colorado Airspace Initiative are not performed to extend the duration of an individual sortie so an aircraft can stay in one location for an extended period or increase the amount of flying hours for a unit, but are performed for training purposes within the budget limitations of the unit. In-flight refueling training is essential for pilots to acquire the skill to use this procedure.

Response to Comment No.3

The loss of airspace due to DIA significantly impacts the Kit Carson MOA, not only in horizontal size but also in altitude. The Two Buttes MOA was designed by the FAA as the only area within unrefueled flying range from the 140 WG home station that would accommodate high altitude AMRAAM training.

Response to Comment No.4

All known users of the proposed Colorado Airspace Initiative training airspace have been identified in the document (see Appendix N). No additional aircraft will be permitted to use the proposed or existing training airspace without supplemental environmental analysis.

Response to Comment No.5

The total sorties from the various types of aircraft that will utilize the airspace associated with the Colorado Airspace Initiative were shown in Appendix N as part of the EIS.

Recommendation: Analyze *all* impacts of the proposed purpose and need for action or flatly state that these maneuvers are prohibited.

3. **Failure to Demonstrate the Purpose and Need for Action, Part II**: The second reason offered for requesting proposed modifications to the National Airspace System is the loss of airspace due to the construction of Denver International Airport (DIA). But the fraction of training airspace lost to DIA is minimal and the Colorado Air National Guard (COANG) continues to maintain a highly effective fighting force, as evidenced by the fact that COANG flyers are now commonly called to fly overseas missions. Most recently the Colorado Air National Guard flew missions in Northern Iraq. Certainly, if COANG pilots are held in such high regard, and rightfully so, the loss of a tiny fraction of training space will not significantly affect their capability to perform. 3
Recommendation: Present in a straightforward manner the size and training effect of the airspace lost to DIA. Replace the airspace lost due to DIA expansion with an equivalent-sized airspace offset or demonstrate clearly why additional space is required. The DEIS as presently written does neither.

4. **No Real Limitations On Aircraft Type, Flight Frequencies, or Routes**: As written now the DEIS includes references to "other Department of Defense aircraft" (Executive Summary page v. and numerous other pages) yet this terminology appears to be used as a catch-all category for the express purpose of allowing additional aircraft types, flight frequencies, or routes in this airspace. Given that out-of-state air national guard units and the US Air Force may also use the proposed space, this "loosey-goosey" terminology constitutes a loophole that is literally big enough for the entire USAF. 4
Recommendation: Identify and place numerical limits on flights and routes by type of aircraft. Specify and limit usage by units other than Colorado Air National Guard. Then use "realistic worst case" scenarios and analyze the impacts accordingly.

5. **Understated Cumulative Impacts**: Cumulative impacts developed from the proposed training scenarios presented in Appendix N to the DEIS are limited to F-16 aircraft impacts. Yet it is acknowledged in Appendix E (page E-1) that the proposed airspace also will be used by "C-130, A-10, F-15, B-1, and other DoD aircraft." In addition, Footnote 1 to Table E-1 states, " Types of aircraft flown include fighter aircraft such as F-16, F-111, F-14, F-15, and F-18, bomber aircraft such as the B-1 and B-52, and airlift aircraft such as the C-130 and KC-135, and other like aircraft." Thus the DEIS, by its own admission, fails to calculate and evaluate *known* impacts to noise, wildlife, air quality, and safety generated by these aircraft. Furthermore, because the relative impacts of F-16s are less than those of older, slower, dirtier aircraft the DEIS as a whole understates cumulative impacts. 5
While the noise analysis attempts to include some other aircraft, it too is incomplete as it fails to analyze airlift aircraft. To conclude that there are "no significant impacts" of any kind while failing to actually compute the impacts is questionable at best.
Recommendation: Place a numerical limit on flights by aircraft other than F-16s using "realistic worst case" scenarios and analyze the impacts on a per-aircraft-type basis. There is no other way to claim an accurate analysis. In addition, the cumulative impacts of other air operations such as commercial overflights from Denver International Airport and military impacts of the Chama Military Operations Area (MOA) should be addressed; this is the meaning of cumulative impact.

6. **Failure to Include the Impacts of Classified Operations**: Cumulative impacts presented in the DEIS do not include the impacts of classified operations nor is there any indication that such impacts have been analyzed at all. Federal regulations generally require that the impacts of classified operations be analyzed despite the fact that detailed classified information will not be disclosed as to exact routes, frequency of flight, or aircraft type. Although there are numerous reasons why this analysis should be done, the fact that the DEIS relies on predominantly volunteer emergency response crews to respond to any eventual mishap renders it unconscionable to fail to analyze the impacts of these classified operations. 6
Recommendation: Assess the impacts of all classified operations that share the current and proposed airspaces, issue a classified appendix to the DEIS, and include summary impacts of classified

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RESPONSES TO COMMENTS

Response to Comment No.6

There are no known or projected classified actions that would utilize airspace identified in the Colorado Airspace Initiative.

Response to Comment No.7

Sortie numbers are an excellent means to determine potential overflights. MTRs are one-way traffic routes so an aircraft can pass over a single location only one time on one sortie. MOAs do allow an opportunity for multi-directional traffic; however, training objectives to vary the pilot's experiences during the sortie and fuel limitations of the aircraft would make repeat identical passes over one ground location an undesirable and unlikely training scenario.

Response to Comment No.8

The number of overpasses made on any one sortie in the La Veta MOA over a specific point on the ground is not predictable.

Response to Comment No.9

Upon review of VR-413, there are ample areas where aircraft could fly at 500 feet in compliance with all FAA restrictions. Therefore, no requirement to unilaterally raise the bottom altitude is needed at this time.

Response to Comment No.10

The ANG takes the public's concerns about pilot accountability very seriously. Any misconduct by a military pilot is a serious matter. If a member of the public is experiencing any problems with the military's operations in any of the airspace in an area that affects a person directly, the public affairs officer at the nearest military installation should be contacted immediately, or call (800) 582-8507.

The Federal Aviation Administration and each military service have very strict rules to ensure pilots stay within defined training airspace. The rules govern minimum altitudes, maximum speed, and type maneuvers that can be performed inside and outside designated training airspace. Military commanders have the authority to suspend pilots who willfully violate flight rules, such as flying outside designated training airspace. The military closely manages the airspace they use to ensure they do not exceed planned parameters.

operations in the cumulative impacts section of the FEIS. Failure to do so will render the FEIS incomplete and in violation of NEPA.

7. **Systematically Understated Impacts**: Use of sortie counts systematically understates all calculated impacts in this DEIS. Impacts, whether they be noise, air quality, or economic are generated by the number of flybys, not the number of sorties. At one time, sortie counts may have been a reasonable surrogate for actual flyby counts, but that is all changed by the capability of the modernized F-16 to refuel while it is in the air. There is no reason to think that a commander would not refuel his force while in an MOA and then proceed to fly additional training routes and engage in additional maneuvers. Indeed, one would *expect* that this would occur because F-16 modernization is one of the two changes used to provide the legal rationale that supports the stated purpose and need of this Draft EIS. It is not appropriate to ignore flyby counts in favor of sortie counts because the number of flybys per sortie will vary from MOA to MOA, from MTR to MTR, and by Alternative.
Recommendation: The impact analysis sections of this draft document must be revised and recalculated based on flyby counts. Because of F-16 modernization, there is no longer any accurate impact analysis based on sortie counts alone. — 7, 8

8. **Failure to Implement Mitigation Measures**: On DEIS page 4-260, several examples of FAA and military flying restrictions are presented. The discussion specifically states, "Avoid flying lower than 1,000 feet above the highest obstacle within a 2,000 feet horizontal radius when over a congested area, such as a city, town, or settlement, or over any open-air assembly of people." Yet in the Preferred Alternative, VR-413 specifies a flight floor of only 500 feet over a number of towns and settlements including Moffat, Villa Grove, Howard, Guffey, Florissant, and Lake George. In addition, the Preferred Alternative fails implement the 1,000-foot floor over the open-air resort area and spa at Mineral Hot Springs.
Recommendation: Raise the floor to 1,000 feet along the entire length of VR-413. Comply with the FAA restrictions that apply to all other flyers. — 9

9. **Failure to Enforce Flying Restrictions**: There is no clear discussion in the DEIS of the penalties or disciplinary actions that will be taken against pilots who violate the MOA and MTR boundaries. In the past, one of the greatest sources of complaints by residents in the affected areas has been irresponsible flying outside or below the designated flight areas by COANG or other pilots.
Recommendation: The mitigation section of the DEIS should discuss how the guard intends to enforce its flight paths. In particular, sanctions, flight restrictions, or other actions to be taken against out-of-state units and "hot-dog" pilots should be specified otherwise any reasonable reader would conclude that there are no such penalties. — 10

10. **Faulty Noise Analysis, Objection 1**: The methodology used in this DEIS inappropriately models multiple acute insults as a low-level chronic condition. The averaging methodology used may have been the best available twenty years ago but it certainly has no place in a "state of the art" document.
Recommendation: Model the noise impacts for what they are, namely high-intensity short-term impacts. Then raise flight floors as to needed to render what will truly be "no significant impact". — 11

11. **Faulty Noise Analysis, Objection 2**: If flights are to be restricted to the hours of 7 am to 10 pm, as stated on page E-6 for the Original Proposal, the noise analysis should be re-calculated based on a fifteen-hour flight day. Is it honest to calculate a 24-hour average for the sole purpose of bringing the noise results below the level of significant impact when it is known that flight will be restricted to a fifteen-hour day?
Recommendation: If insisting on using flawed methodology, at least calculate impacts in a more realistic manner by using a 15-hour averaging time. For the Preferred Alternative, state explicitly if night flights are planned. — 12

RESPONSES TO COMMENTS

Response to Comment No.11

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

Response to Comment No.12

Ldn is defined on the basis of a 24 hour day. As such, it provides an honest comparison of cumulative impact. Arbitrarily changing its time base on a case-by-case basis would significantly compromise its validity.

Ennis Comments
DEIS Colorado Airspace Initiative
June 28, 1996

12. **Questionable Air Quality Analysis Results:** With respect to potential for violation of PSD Class I standards along VR-413, Tables 4-109 and 4-110 are presented. Table 4-109 describes the Original Proposal and Table 4-110 describes the Preferred Alternative. The fourth column in each table describes the "Pollution Concentration" and the last column describes the "Percent of Class I PSD Limits." *How is it that the concentration results for every pollutant except NOx are identical to four decimal places and the percent of CLASS I PSD Limits are identical for every pollutant?* It appears that the model was not run correctly or that the results were incorrectly tabulated. How can the results be identical when there are different numbers of flights? Or were the number of flights simply rounded to 200 by the analyst or by the computer program? If that is the case COANG is claiming 2 orders of magnitude (a factor of 100) more accuracy than they actually have. How many other calculations in these analyses are suspect??
Recommendation: Check all modeling inputs and rounding parameters, verify results, and confirm that the results presented have been transcribed properly. Provide explanation for identical results when the number of flights is known to be different. — 13

13. **Faulty Safety Analysis:** In lieu of performing a bird-strike analysis, the DEIS states, on page 4-65, that, "Due to the fact that only one bird-strike has occurred in existing airspace associated with the Colorado Airspace Initiative in the past five years, the likelihood of future bird-aircraft strikes under the Original Proposal Alternative or the Preferred Alternative would be expected to be low." This is faulty logic. It is equivalent to stating that, "simply because we never had an accident, we never will in the future." Such thinking is dangerous and is repeated throughout the safety section.
Recommendation: Perform the analysis in conjunction with appropriate wildlife agencies. The analysis must recognize the seasonal presence of some 40,000 migratory birds in the San Luis Valley. If the resulting analysis shows that bird-strike probabilities are significant during peak migratory periods, mitigation measures such as seasonal flight prohibitions should be implemented. — 14

14. **Oral Testimony:** Comments and recommendations previously provided by this reviewer on May 22, 1996, attached, are incorporated by reference and are to be considered part of this written record. — 15

Response to Comment No.13

The EIS evaluated aircraft air pollution resulting from each of the alternatives studied in the EIS using scientifically validated emissions modeling tools designed to predict ground-level pollutant concentrations. The total air pollution emissions from the 140 WG would be reduced under the Preferred Alternative and the Original Proposal as compared to existing conditions, because the total number of flying hours would be reduced from 5005 to 4600 hours. The cumulative air pollution concentrations, as determined through computer modeling for each of the airspace segments, could increase or decrease depending upon a variety of factors. These factors include the type of aircraft using the airspace, their altitude, frequency, power setting and meteorological conditions rather than a strict proportional relationship to the number of sorties flown. Nonetheless, under the worst case scenario modeled for each airspace segment under each of the alternatives, no air pollution concentrations resulting from aircraft operations would cause any local area to be out of compliance with Federal or state standards or make any significant impact on air quality in any area. Also, when comparing these air pollution concentrations with Federal and state limits for the Prevention of Significant Deterioration (PSD) in air quality, all levels were far below minimums.

Response to Comment No.14

The USAF has established a Bird/Aircraft Strike Hazard (BASH) Team to implement procedures to prevent and reduce the threat of bird/aircraft strikes, and to investigate and track any bird strikes that occur. In addition, each USAF/ANG base or flying unit is required to establish a BASH program to minimize the risk of bird strikes both at the base airfield and in airspace training routes for the unit. The USAF BASH Team assists each base or flying unit by providing Bird Avoidance Model (BAM) graphs. These graphs estimate the relative bird strike risk for flying along a specific low-level route or operations area. The model is developed on the basis of waterfowl and raptor migration and concentration data and accounts for seasonal concentrations of birds. The BAM graph depicts the severity of the bird strike hazard at a particular time of day, month, and segment of a low-level route. This information is used by the flying unit to determine the optimum route schedule, and avoidance measures to be taken to prevent bird/aircraft strikes. In addition, the unit publishes notices to Airmen (NOTAM) to alert transient aircrews to specific bird migration hazards activity periods, and avoidance procedures.

Response to Comment No.15

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

W. Carter McClintock
P. O. Box 317
Crestone CO 81131

SHIPPED JUL 0 1 1995

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB MD 20762-5157

Dear Manager:

I would like to address several shortcomings in both the Colorado Airspace Initiative and the Draft Environmental Impact Statement it has produced.

The entire mission of the COANG is unclear at this time. Our enemies are de-centralized terrorists against whom aircraft are not effective or appropriate. The peace-keeping mission in Bosnia will soon be over. The rogue states of the world are in relative submission at this time. The world is at relative peace at the moment. There will always be the need for preparedness and vigilance but certainly less so now than in recent times. If that should change, we can revisit the issue but for now, increased trainging is not necessary. 1

The San Luis Valley is a solirary, quiet place, whose residents are there for just those reasons. To make war on the peace of this place is wrong. I have been sitting in my yard when your jets have flown over at very low altitudes and it is aggravating in the extreme. One has just enough time to get ones fingers in ones ears. Quiet, contemplative communities are just as valuable to the culture of this country aswar machines. Overflights of the Sangre de Christo Wilderness are unconscienable. It is a wilderness, a place of nature and should never be exposed to the extreme disruption of your aircraft, at any altitude. 2

I am sure you are very excited about the acquisiton of F-16s for the 104th. I would be, too. Especially if someone else was paying for them. But, they are currently being shown to be pretty dangerous. They seem to be crashing a lot, lately. It is very wrong to be training with them in areas where people live. 3

With regard to the DEIS, several shortcomings are apparent.

First, there is no means of addressing misbehaviors or violations by visiting pilots. It is possibly for one to create numerous problems and not face sanctions. That is too much of a temptations for individuals engaged in "pushing the envelope". 4

The conclusion of "no impact" in many of the catagories is patently false. Your machine are noisy and violent. They are big and the go fast. Their noise is deafening. They are dangerous.

There was no public scoping meeting held in the Crestone-Moffat area. That was an extremely transparent effort to minimize the input of a community directly affected by your plans. Don't you have the courage to face the citizens you are theoretically defending? Wow, what a cowardly move that was. 5

This is an ill-concieved plan which puts quiet, uninfluential people in harms way. No alternatives were considered. Why are you picking on the poor and small? Don't make war on the peacful. 6

Sincerely,

W. [signature]

734

RESPONSES TO COMMENTS

Response to Comment No.1

Training for potential military conflict in time of peace is a reality recognized by the Congress and the President. As military forces are cut back, the quality of training for existing forces must be maintained and improved to ensure our nation has an effective military. As the active duty military force is reduced in size, the ANG role and the role of the 140 WG in the total force structure is increasing. Over the past several years, the DOD has conducted studies to evaluate mission readiness and cost effectiveness of its total force. In comparison to DOD regular components, the ANG has relatively low operating costs and provides a cost effective investment.

Response to Comment No.2

The ANG adheres to its "Policy on Air National Guard Overflights of Designated Wilderness and Wild and Scenic Rivers," as presented in Appendix L. This policy is intended to protect specifically identified areas, such as the Sangre de Cristo and Greenhorn Mountain Wilderness Areas, by limiting training operations to no lower than 2,000 feet above ground level whenever possible unless safety of the flight or operational parameters (e.g., weather conditions) may be compromised.

Response to Comment No.3

The 140 WG of the Colorado Air National Guard has been flying F-16 aircraft since January 1992. In this time, one aircraft crash has occurred for the 140 WG. This crash occurred in Wyoming in November 1993 while conducting training operations on Instrument Route (IR) 416.

The overall safety record for all F-16 aircraft in the USAF inventory is calculated as the number of mishaps (crashes) per 100,000 hours of flight time. This calculation is done for each government fiscal year (FY). The average mishap rate from FY 1990-1994 for F-16 aircraft was 4.47 mishaps per 100,000 hours of flight.

Response to Comment No.4

The ANG takes the public's concerns about pilot accountability very seriously. Any misconduct by a military pilot is a serious matter. If a member of the public is experiencing any problems with the military's operations in any of the airspace in an area that affects a person directly, the public affairs officer at the nearest military installation should be contacted immediately, or call (800) 582-8507.

The Federal Aviation Administration and each military service have very strict rules to ensure pilots stay within defined training airspace. The rules govern minimum altitudes, maximum speed, and type maneuvers that can be performed inside and outside designated training airspace. Military commanders have the authority to suspend pilots who willfully violate flight rules, such as flying outside designated training airspace. The military closely manages the airspace they use to ensure they do not exceed planned parameters.

Response to Comment No.5

The hearing locations were selected to ensure the inclusion of a wide geographic representation of potentially interested parties within the affected areas to ensure maximum participation. The availability of meeting rooms with the requisite facilities, that could be reserved on the dates required, also was a significant factor in the selection process. Input from the Citizens Working Group and its members was also considered. These factors were considered more significant than selecting a site primarily on the basis that it might be directly under an airspace.

Response to Comment No.6

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Written Comment Form

RECEIVED JUL 01 1996

ENVIRONMENTAL IMPACT STATEMENT FOR THE COLORADO AIRSPACE INITIATIVE

If you would prefer to submit written comments on the DEIS, please use this form. Continue on the back of the form or attach extra sheets, as necessary. Thank you.

NAME: GAIL RITTER

TITLE/ORGANIZATION: OWNER, RITTER RANCH

ADDRESS: 3583 COUNTY ROAD 350, LA VETA, CO 81055
(Street) (City/State/Zip)

-- COMMENTS --

I am in total agreement with Dr Lawrence Harris's letter (see attached). 1

We are severely affected by the flight. In addition the deer, cattle and horses have been stampeded by low flying aircraft. Last September 1995 it was on Main Street in La Veta having a conversation with a friend. Several jets flew so low we had to discontinue our conversation. 2

March 1, 1996 about 1:59 p.m. there was a sonic boom. The noise level disturbs me as well as the animals.

Gail Ritter

Please hand this form to the staff, drop into the collection box, or mail to:

Program Manager, CAI EIS
Environmental Division
Air National Guard Readiness Center/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

736

RESPONSES TO COMMENTS

Response to Comment No. 1

Response to the comment letter from Dr. Harris was previously given. Please see index in this volume.

Response to Comment No. 2

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

COPY

Harold and Mary V. Nelson
610 Wild Turkey Rd.
Westcliffe, CO 81252

July 2, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fletchet Avenue
Andrews AFB, MD 20762-5157

Dear Sirs:

As business and property owners in Huerfano County for the last 15 years and property owners (and now fulltime residents) of Custer County for the last 10 years, we are writing to voice our strong opposition to the Colorado Airspace Initiative.

We have been deeply concerned with this subject for quite a few years and in particular since attending the Westcliffe scoping meeting two years ago in May. After reviewing considerable information about the proposals, inspecting the DEIS and attending the May 16, 1996 Westcliffe meeting we find that our objections are stronger than ever.

Especially alarming are the methodology and impartiality of many of the studies conducted for the DEIS. The DEIS admits that the Region of Impact here is not the same kind of area as a community next to an airport, and yet it uses the same standard of 65 decibels over a 24-hour average as an acceptable level. Therefore, according to the DEIS there is no impact on our valley based on this standard. It is like comparing apples to oranges to use this type of analysis and this standard in this setting. Another questionable study was that done on the noise effect on a herd of buffalo in the San Luis Valley as verbally reported by a civilian observer (May 16, 1996 Westcliffe meeting). 1 2

The way of life which attracted us to this area (we previously lived in Chicago, IL and Milwaukee. WI) and the economic factors and jobs which enable us to live here are endangered. The detrimental environmental effects on wildlife and on the newly established Sange De Cristo Wilderness Area alone are sufficient to discard the plan. With all of the airspace available over the many Military Reservations in the western United States that have no public access and are virtually unpopulated except for military personnel, we see absolutely no justification for pursuing MOAs and MTRs over the Wet Mountain Valley and adjacent wilderness areas. In all likelihood future wars will be fought over desert areas so why not start using already designated military property? 3 4

737

RESPONSES TO COMMENTS

Response to Comment No.1

The approach used in the EIS has been modified. The Federal Interagency Committee on Noise (FICON), representing a variety of Federal agencies with a mix of concerns associated with aircraft noise, reviewed aircraft noise analyses issues in 1992. This committee's report (FICON 1992) continued an approach to evaluating relative impacts associated with aircraft noise that has been recognized by noise analysis experts as the most widely endorsed and comprehensive approach to aircraft noise analysis available. This approach to noise analysis was incorporated into the analyses associated with the Draft EIS. In general, Federal land use compatibility criteria are derivatives of guidelines first devised for land near airports. All land use compatibility is based on the use of Day-Night Average Sound Level (abbreviated as DNL or Ldn) as the descriptor representing community noise environments. The criteria treat areas below DNL 65 dB as compatible for all uses, including residential, and they treat DNL 65 dB as a threshold for significant exposure. There is no generally accepted method for treating rural areas differently for these purposes.

However, many EIS reviewers, including some members of the Federal regulatory community, felt the application of the FICON standards, and the 65 dB threshold, to a rural setting was inappropriate for such areas with more quiet ambient noise conditions. Consequently, the use of the 65 dB threshold as the sole means to assess relative impacts or the acceptability of noise levels associated with aircraft operations addressed in the EIS has been modified and the analysis now includes additional information to evaluate potential impacts.

Response to Comment No.2

The "Bison Study" presented in Appendix J was intended simply to observe the reactions of the bison to low-altitude F-16 overflights and to determine if a herd stampede was likely to occur. This observational study was accomplished at the request of certain members of the Citizen's Working Group. Members of this Working Group were invited to participate in the observations. In addition, several media representatives were present to observe the overflights. The observational study was never intended to evaluate other behavioral or physiological reactions of bison to aircraft overflights. The EIS authors relied on other existing published studies based on more detailed scientific methodologies to provide information on various other behavioral or physiological reactions of animals to aircraft noise.

Response to Comment No.3

The ANG adheres to its "Policy on Air National Guard Overflights of Designated Wilderness and Wild and Scenic Rivers," as presented in Appendix L. This policy is intended to protect specifically identified areas, such as the Sangre de Cristo and Greenhorn Mountain Wilderness Areas, by limiting training operations to no lower than 2,000 feet above ground level whenever possible unless safety of the flight or operational parameters (e.g., weather conditions) may be compromised.

Response to Comment No.4

The use of other training areas was examined as part of the development of the alternatives studied in detail in the EIS in Subsection 2.3. The proposal was designed to minimize conflicts with potentially sensitive areas while providing the training resources necessary to meet military readiness requirements. Specific narrowing criteria for the selection of military training airspace (see Subsection 2.3.3 in Volume I) were used to evaluate other locations, and no alternative training areas were identified that could be substituted for the airspace configuration proposed in the alternatives studied in the EIS.

The primary user of the airspace included in the Colorado Airspace Initiative is the 140 WG based at Buckley Air National Guard Base in Aurora, Colorado. Because of limited resources and aeronautical constraints, virtually all of our nation's fighter units train in airspace that is within a "tank of gas" of the aircrews' base.

COPY

The Air National Guard has not been able to justify using our airspace, but we get the impression that they plan to do it anyway! It is absolutely vital that we preserve Citizens Rights and utilize the military ground and airspace which is already designated. Please eliminate the Airburst MOA, the LaVeta MOA and all MTRs leading to the Airburst Range! 5 6

Yours truly,

Harold Nelson

Harold Nelson

Mary V. Nelson

Mary V. Nelson

cc: Governor Roy Romer
Senator Hank Brown
Senator Ben Nighthorse Campbell
Congressman Scott McInnis
Custer County Action Association

739

RESPONSES TO COMMENTS

Response to Comment No.5

The Colorado Airspace Initiative is not an expansion of airspace, but rather a modification. In many cases, this modification actually results in a reduction of airspace and/or number of sorties flown. The need for the Colorado Airspace Initiative is presented in Subsection 1.3 of the EIS.

Response to Comment No.6

The existing La Veta MOA and VR-413, as well as the proposed Airburst MOA (a revision of the existing Fremont MOA) and the MTRs leading to the Airburst Range form the basic air-to-surface training arena within which the Colorado ANG will train in the future to maintain its combat readiness status. Without these airspace components, the Colorado ANG could not meet wartime training requirements.

7-5-96

To', Program Manager
CAI EIS Environmental Div. Air National
Guard Readiness Center - CEVP
3500 Fletcher Ave.
Andrews AFB, MD 20762-5157

740

I wish to state that I am very much against the proposed expansion of The Airburst and MOA's by The Air National Guard.

I am opposing the above because of the destruction of my personal lifestyle, my animals (I do Animal Rescue), the damage to the wilderness and beauty and serenity of my area (Huerfano County and Custer County) 1

Please include my comments as part of the record.

Sincerely
Margi Durrum
321 Taylor Blvd
Walsenburg, Co 81089

RESPONSES TO COMMENTS

Response to Comment No. 1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

741

July 4, 1996

RE:Military Flyovers in the Sangre De Cristos of Colorado:

I am a Summa Cum Laude scholar and 6th generation Vermont native. I moved to Crestone Colorado where I find the utter silence and darkness that I grew up with, and the beauty of the spacious natural environment.

Please find enclosed a letter and a poem I wrote which illumine how such silence and darkness are so vital in being human.

The quality of silence found here in the Sangre De Cristo Mountains of Colorado should be preserved. This is a place of rare natural beauty where a community of equally rare human beauty is forming.

One of the core reasons that monstrous violence is now constant in the streets of our nation is because most people don't have the silence, and beautiful space we all really do need to be ourselves. Nor do most have the darkness we all need to see and reach for the stars. 1

At times military airplanes fly over our mountains and violate our silence. In looking into this I have learned that the U.S. military is now requesting permission to do some 20 such "sorties" a day ! The people of this region will never allow this.

To date, the people who live along the Sange De Cristos of Colorado haven't yet realized what it would be like if these constant flyovers took place. When they do, they will rise up to protect their home from this ruination by exposing everything the U.S. government/military is up to in this region.

Sincerely,

Brooke Solomon

Brooke Alexa Solomon
Crestone, Colorado, 81131
719-256-4191

RESPONSES TO COMMENTS

Response to Comment No. 1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

January 20, 1995

"...chase a deer,
and end up
anywhere..." J. Rumi

Dear Arthur,

It was the wild deer, antelope, elk, bear, and buffalo I followed to the most remote place I can reach, here to the feet of these mountains, where I shall feed on them, and they lend me their strength, in utter darkness by night, most always sunshine by day, in this place of silence, clean air and water.

I am here rather in spite of the human doings in Crestone.

Whatever else you know to be true of me, I grew in and on and with the forest and meadow throughout all the generations of both my family trees. And in this earthly life the streams and rivers were the only mirror I should have trusted, as the wild deer, rainbow trout and raccoons were my only kindred playmates, and the whipoorwhil who sat in the pine tree outside my bedroom window every dusk and sang me to sleep my only comforter.

It is time for me to be at home with such as these again.

I will always be open to working with you. Could we ever do what we do with someone else ? I'd sooner set a day and time for us to work telepathically. Knowing us, this might produce a most interesting series of paintings.

Is there a better word than love for everything good ?

Love,

Brooke

Native Prince

The road here to meet you--
my man
born at the end of the road
at the foot of this mountain
and raised up
straight as an arrow---
a native prince
at the end of America--
a gatekeeper
at the ending of the American Dream...

the road here to meet you now
was very long,
travelling the cutting edges
and tumbling my nature
into a woman that you saved yourself for
your whole life
feeling that I would be the only one in your lifetime
and would come to you wearing hats...

so we could make
this big love
that draws the poison
clean out of us...
as we move beyond times
and places...

Beneath the real American flag
that hangs over your hard bed
we breathe our prayers together
with our whole bodies

and we strobe
like the big stars
in the utterly silent
black sky

in the temple
of our private mountain...

wise men
find our gifts...

May 8, 1995
Brooke Solomon/Crestone Colorado

July 8, 1996

To: Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrew AFB, MD 20762-5157

From: Patricia Joy Richmond
P.O. Box 113
Crestone, CO 81131

Re: Written Comments and Recommendations on the Draft Environmental Impact Statement or the Colorado Airspace Initiative in general and specifically in reference to MTR 413

Background:

I first came to the San Luis Valley in southern Colorado as a college student at Adams State College in 1955. I returned to this area as a permanent resident in 1964 to serve as a teacher in the Del Norte and Monte Vista school districts. I am recognized throughout the San Luis Valley, the state, and nationally for my research techniques and am considered an expert on regional history and environmental issues. My familiarity with and knowledge of the San Luis Valley provides an expertise that establishes validity for my comments.

1. Failure to take into consideration expert local testimony: Science and Engineering Associates (S&EA) personnel have stated that expert local testimony presented during the Scoping process was disregarded as prejudicial. Who better know the issues and potential environmental impacts than those experts who live within an area? To substitute out of date conclusional comments from studies initiated shortly after the passage of the Environmental Protection Act for current knowledge is unconscionable. The argument of bias appears particularly absurd considering the large number of documents cited to support the no significant negative impact conclusions that originated within documents prepared by other military agencies or organizations under contract to military agencies. 1

By law, the Environmental Impact Process for the Colorado Airspace Initiative (CAI) should have included a bidding process. This step must occur with selection of a new contractor to prepare an accurate Environmental Impact Study. As promised by General Whitney in Crestone, Colorado, representatives from the civilian grassroots organizations groups should be included in the process of securing the agency best qualified to conduct a true scientific study. The agency selected should be required to accept testimony offered by local expert witnesses and should be prepared to work with citizens having expertise pertinent to the issues raised during the Scoping process. 2

2. Generalities, inaccurate statements, and insufficient data: The DEIS is filled with careless errors and unsubstantiated generalities about climate, geography, wildlife, habitat, 3

RESPONSES TO COMMENTS

Response to Comment No.1

All comments received during the scoping process associated with this EIS were considered in the preparation of the document. Such comments, as they relate to the proposal, have helped to improve the EIS process and have become a part of the administrative record for the proposal.

Response to Comment No.2

All contractors that prepare environmental studies for the ANG are selected through competitive procurements in accordance with the Federal Acquisition Regulations (FAR), including the firms associated with this EIS: Science and Engineering Associates, Inc.; National Security Analysts, Inc.; and Wyle Laboratories.

Response to Comment No.3

The research completed to support the preparation of the CAI EIS follows the use of various accepted scientific methodologies used to analyze pertinent potential impacts. These analyses have been prepared by qualified scientists and engineers who perform these services for a variety of customers, including the ANG.

Response to Comment No.4

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.5

Military training route VR-413 is an existing airspace currently used for training. Under the Preferred Alternative, its width would be reduced in size to 6 miles. This would significantly reduce the land area under this airspace and would move its eastern boundary away from the Sangre de Cristo Mountains and the Great Sand Dunes National Monument. In addition, its turn point near Mount Blanca would be moved further south. The minimum altitude would be raised from surface to 500 feet above ground level.

Richmond2

cultural resources, and economic patterns. Bibliographic references indicate possible perusal of a few resources that might offer a broad spectrum of casual information but would not be recognized as containing enough specific scientific data to provide a reasonable basis for a conclusion of environmental impact.

A new contracting agency for a revised DEIS should consult with local experts to locate specific pertinent reference materials. Also, references submitted by civilians during the Scoping process should be included in the study to provide greater assurance to the public that the revised DEIS has been prepared without bias. For S&EA personnel and Air Guard representatives to restrict the DEIS analysis to comments or data supplied by officials within other government agencies (primarily federal agencies) or to information gleaned from copyrighted sources and other government reports flouts the very premise of democracy--the right of the citizen to participate in government and especially to share in the determination of any action which might directly impact his life. 4

3. Impact of MTR 413 on San Luis Valley: The DEIS fails to prove that the increased use of MTR 413 within the San Luis Valley by F-16s and other unspecified military aircraft will not have a detrimental impact upon the growing tourism industry of the San Luis Valley. Agriculture is, and will remain, the primary contributor to the economic development of the San Luis Valley. However, agricultural economic stability fluctuates with market prices. Data prepared by the State of Colorado shows that eco-tourism brings important revenues to the San Luis Valley. Not only does tourism help stabilize local economies, especially in years when agriculture suffers low market prices or loss of products, but distributions of tourism dollars reach into all communities with greater diversity among populations than do agricultural dollars. Therefore, tourism becomes more essential to the economic growth and stability of this area than might be the case in areas or communities having greater economic diversity. 5 6

The DEIS also ignores or diminishes valid concerns raised by citizens living under MTR 413 about fire hazard, health and safety, or the number and diversity of sensitive areas. While the Preferred Alternative does acknowledge some issues relevant to religious communities dependent upon solitude, the DEIS ignores serious impacts upon people in small communities (especially children in schools that experience frequent overflights). The DEIS also ignores the several non-federal wildlife areas and wetland habitats underlying MTR 413. The DEIS suggests, and ANG personnel have tried to argue, that consideration must be given only to impact upon wildlife within federal refuges; however, by law all wildlife areas fall within protectional jurisdiction. The extent of wildlife habitat (especially habitat frequented by sensitive, threatened, and endangered species) as well as the number and range of wildlife refuges and areas within the northern half of the San Luis Valley preclude that MTR 413 must be discontinued. Times have changed. The people of the San Luis Valley have changed. Types of aircraft and training needs have changed. Conclusions presented and accepted in 1977 no longer hold true. The DEIS fails to present a fair analysis of the impacts the CAI will have on the SLV as it exists today. 7

4. Potential for major catastrophe due to bird strike: The DEIS and Air Guard representatives have failed to prove that bird strikes, especially along MTR 413, do not pose potential threat to the safety of civilians as well as to pilots. The DEIS does not even 8 9

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RESPONSES TO COMMENTS

Response to Comment No.6

The role of tourism in the local economy, and its impact from the alternatives associated with the CAI, have been studied in the EIS as a part of the evaluation of socioeconomic impacts. There are a number of factors, other than aircraft operations, that may affect tourism and the use of recreational areas, including weather, the proximity of other attractions in the area, and the economy. While it is possible that a tourist visiting an area may find an aircraft overflight to be annoying, no significant change to the tourist industry would be expected considering the fact that the majority of the CAI airspace has existed for many years and the relevant influences from military aircraft operations are not changing in the study area. The contribution of tourism earnings to total industry earnings was presented in the EIS for each airspace. In all instances, these values were very consistent with overall state levels of tourism earnings as compared to industry earnings.

Response to Comment No.7

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Richmond3

acknowledge the spring and fall crane migrations which bring hundreds of thousands of Sandhill cranes into the San Luis Valley. The DEIS offers casual mention of ducks and geese and a few common species such as robins, chickadees, and blackbirds as though the San Luis Valley's avian populations were no different than any urban park. Design Graphics Associates' Recreational Master Plan for the San Luis Valley reveals the San Luis Valley, especially areas surrounding San Luis Lake and the Blanca wetlands, provides habitat for four species considered rare throughout the world and 32 species considered rare in Colorado. A carefully researched historic birding guide (beginning with John C. Frémont's expedition in 1848) lists over 350 species identified within the San Luis Valley. 10

The assumption that the past accurately predicts the potential for future bird strikes cannot be and is not substantiated. The aircraft flown in the past were slower and had a different design than the F-16s. During a discussion in January of 1993, Dick Massey admitted the Air Guard's concern about bird strikes because the design of the F-16 tends toward ingestion of birds. Statistics released by the Air Force show thousands of bird strikes occur annually and are a primary safety concern. Guidelines for defining a *bird-strike* restrict these numbers to bird-strikes that actually cause structural damage to the aircraft or result in a crash. The potential safety hazard posed by birds ingested or mutilated is unknown. A National Parks study on military overflights, which (like the historic bird list) was submitted during the Scoping process but not included in preparation of the DEIS, specifically referred to concerns about safety hazards resulting from bird strikes. Simple denial and distortion of potential hazard from the numbers of large bird species--eagles, hawks, cranes, pelicans, cormorants, egrets, herons, geese, and ducks--does not substitute for valid consideration of this real threat to civilian and pilot safety within the San Luis Valley. While bird-strikes with small ground nesting neo-tropical and shore birds tend to occur at altitudes below 1,000 feet, the raptors and waterbirds have flight patterns that carry them from ground level to above the clouds. 11

The DEIS blatantly ignores the concerns and recommendations of government officials and agencies specifically charged with protecting and preserving the wildlife resources. The potential for bird-strike within the San Luis Valley provided basis for the Colorado Division of Wildlife recommendation that MTR 413 be discontinued south of the Arkansas. Governor Romer included this recommendation in his letter dated November, 1992. Following review of technical data and discussions with Air Guard and wildlife officers, the Citizens Working Committee included the CDOW recommendation in their Alternative Proposal.

Nothing in the DEIS substantiates the conclusion of no significant negative environmental impact concerning the issue of potential hazards from bird-strikes nor does the DEIS deal with impact upon specific bird populations other than to present unsubstantiated or inaccurate generalities.

5. Inaccuracy of maps showing MTR 413: Maps accompanying the DEIS are so non-specific as to location it is impossible to determine the exact areas that would be impacted by low level military overflights. Therefore, any conclusions or comments suggesting no negative environmental impact must be discounted. A supplemental map used with the displays presented during the DEIS comment hearings has lines for MTR 413 drawn 4.5 miles either side of center 12 13

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RESPONSES TO COMMENTS

Response to Comment No.8

Because of the potential for loss of a pilot's life and the high cost of modern military aircraft, avoidance of collisions with birds is extremely important to the ANG. The potential for a bird-aircraft strike would not change significantly under the proposal. Both the Original Proposal Alternative and the Preferred Alternative consist largely of modifications to existing airspace or establishments of new airspace in the vicinity of existing airspace. These actions would, therefore, encompass the same seasonally adjusted bird avoidance procedures associated with the bird migration corridors as are utilized currently with the existing airspace. Due to the fact that only four bird strikes have occurred in existing airspace associated with the Colorado Airspace Initiative in the past five years, the likelihood of future bird-aircraft strikes under any of the alternatives would be expected to be low.

The USAF has established a Bird/Aircraft Strike Hazard (BASH) Team to implement procedures to prevent and reduce the threat of bird/aircraft strikes, and to investigate and track any bird strikes that occur. In addition, each USAF/ANG base or flying unit is required to establish a BASH program to minimize the risk of bird strikes both at the base airfield and in airspace training routes for the unit. The USAF BASH Team assists each base or flying unit by providing Bird Avoidance Model (BAM) graphs. These graphs estimate the relative bird strike risk for flying along a specific low-level route or operations area. The model is developed on the basis of waterfowl and raptor migration and concentration data. The BAM graph depicts the severity of the bird strike hazard at a particular time of day, month, and segment of a low-level route. This information is used by the flying unit to determine the optimum route schedule and avoidance measures to be taken to prevent bird/aircraft strikes. In addition, the unit publishes Notices to Airmen (NOTAM) to alert transient aircrews to specific bird migration hazards, activity periods, and avoidance procedures.

Response to Comment No.9

Comment noted. Additional discussion of Sandhill cranes has been added to Subsection 3.8.6.2.

Response to Comment No.10

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Richmond4

not 3.0 miles either side of center as stated in the Preferred Alternative. How can any comment within the DEIS be considered valid concerning impact of MTR 413 if the Air Guard cannot or will not specifically and accurately identify the proposed route?

6. Diversity of areas impacted not considered: Although geologists and geographers describe the San Luis Basin as unique in its own diversity of geophysical features, natural resources, and habitat potential (both human and wildlife), the DEIS offers no evidence of consideration for differences between this area and other areas throughout the proposed Colorado Airspace Initiative. That this document offers not one variation in the supposedly scientifically-determined outcome is incredible. No sensible person believes that not one action within the expanse of territory encompassed by the CAI has a potential for negative impact. The repetition of the same conclusion, over and over, is illogical and ridiculous.

14

The military has managed to slip past careful adherence to the intent of the Environmental Protection Act, and has even ignored specific stipulations of the law, by citing the need for national security during the Cold War decades. For Air Guard officers to continue this tact by declaring MTR 413 is essential because the San Luis Valley resembles Irag, Columbia, or Bosnia destroys civilian faith in any valid reasons the military may have for continuation of MTR 413. For the DEIS to take up this same kind of nebulous mumbo-jumbo rather than providing specific data demonstrates this document is nothing more than a biased misappropriation of tax dollars.

15

The DEIS fails to prove the need for MTR 413 (which has not been done in any document at any time throughout this entire process), nor does the document adequately or accurately substantiate the oft-repeated comment of no significant negative impact. If the Pentagon does not initiate its own investigation into the contract process and use of tax dollars spent in this sham that the Air Guard Bureau has tried to foist upon the public as a valid Environmental Impact Process, then the General Accounting Office should launch its own investigation not only into the Colorado Airspace Initiative but also into how much money American taxpayers appropriate annually to salaries of Pentagon bureaucrats whose jobs depend upon developing similar initiatives as well as to businesses like S&EA who routinely produce DEIS and EIS documents filled with the same unsubstantiated, inaccurate generalities presented in this DEIS. The public has a right to know not only why S&EA received $450,000 to produce a boiler-plate DEIS but also how the Air Guard Bureau expended the other one million plus dollars reportedly spent on this DEIS.

16

17

The DEIS does not list the Colorado Air National Guard among the contracting agencies. Why are they not included? This supposedly is their airspace initiative. The DEIS makes it clear the so-called CAI and the Preferred Alternative developed by Governor Romer's Director of Defense Initiatives were Pentagon-initiated. The CAI is nothing more than an airspace grab, a takings, by a federal agency for unspecified purposes. No DEIS can have validity unless all purposes, activities, uses, guidelines, regulations, and mitigations are clearly stated and defined. Congress intended for the public to know how federal actions will impact their lives. This DEIS fails to satisfy that lawful requirement. The civilian population has the right to hold agencies and individuals accountable for failure to fulfill their obligation.

18

747

RESPONSES TO COMMENTS

Response to Comment No.11

See response to Comment No. 8.

Response to Comment No.12

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.13

The correct map is the map displayed in the EIS (3.0 miles either side of center line).

Response to Comment No.14

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.15

See response to Comment No. 5.

Response to Comment No.16

All contractors that prepare environmental studies for the ANG are selected through competitive procurements in accordance with the Federal Acquisition Regulations (FAR), including the firms associated with this EIS: Science and Engineering Associates, Inc.; National Security Analysts, Inc.; and Wyle Laboratories.

Response to Comment No.17

The role of the 140 WG is indicated in Subsection 5.2.

Response to Comment No.18

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

7. Abuse of the law and civilian rights: Executive directive, FAA regulations, and the Environmental Protection Act all guarantee that citizens living within rural areas have the same rights and protections as citizens living in urban areas. The Colorado Air National Guard has in the past established avoidance criteria over some small communities and other sensitive areas--for example, Woodland Park, Florence, Fluorissant Fossil Beds National Monument. Yet, in the San Luis Valley, which demographically holds some of Colorado's poorest populations, military aircraft have established a reputation for routinely ignoring and violating their own regulations and procedures. Air Guard regulations cited in the DEIS state military aircraft are to avoid all persons, animals, houses, automobiles, boats, etc. by at least 500 feet, yet witness after witness testified during the Scoping process of abusive and life-endangering violations by low-flying military aircraft. The DEIS does not acknowledge any of this testimony. Some Colorado Air National Guard officers continue to deny that such violations have occurred and suggest that those offering testimony had motive or were incapable of determining actual height or speed of aircraft during their encounter. 19, 20

The DEIS for the Colorado Airspace Initiative reveals no effort or willingness on the part of the Air Guard Bureau to mitigate with federal, state, or local agencies or with local officials to assure resolution of the issues and concerns raised during the Scoping process. The DEIS provides no accountability if the COANG or any other military agency violates airspace regulations and procedures. The ambiguity of the CAI will promote continued violations of civilian rights and safety. That same ambiguity also makes a true scientific evaluation of negative environmental impact virtually impossible. This DEIS is designed to encourage and allow abuse of targeted rural populations within southern Colorado by pilots flying low-level military aircraft.

8. Failure to analyze and evaluate the Citizens Working Committee Alternative Proposal: The Environmental Protection Act requires consideration of all viable alternative proposals. The Citizens Working Committee worked diligently to find a compromise alternative that would meet the Colorado Air National Guard's training needs. Consultation with representatives of federal and state agencies, including COANG and the Air National Guard, allowed the civilian members to evaluate whether each facet of this Alternative Proposal could satisfy COANG's training needs. The blatant exclusion of this viable alternative in the DEIS in the analysis process emphasizes the bias of the document toward the so-called Preferred Alternative. 21

9. **Failure to prove conclusion of no significant negative impact:** The preparation of this DEIS, which relies on insignificant and out of date sources, is shoddy. Conclusions are based on insufficient or inaccurate data. The law requires the federal agency seeking this action to prove to the satisfaction of the civilian population that no significant negative impact will affect those citizens or their environment. Contrary to the law, this DEIS presumes that those opposing this action must prove their concern that the proposed action will result in a significant negative environmental impact. **The very strength of opposition to the Colorado Airspace Initiative and the public reaction to the biases represented within this DEIS justifies a conclusion that the Colorado Airspace Initiative already does have and will continue to have a significant negative impact upon the civilian population of rural southern Colorado.** 22

RESPONSES TO COMMENTS

Response to Comment No.19

The ANG takes the public's concerns about pilot accountability very seriously. Any misconduct by a military pilot is a serious matter. If a member of the public is experiencing any problems with the military's operations in any of the airspace in an area that affects a person directly, the public affairs officer at the nearest military installation should be contacted immediately, or call (800) 582-8507.

The Federal Aviation Administration and each military service have very strict rules to ensure pilots stay within defined training airspace. The rules govern minimum altitudes, maximum speed, and type maneuvers that can be performed inside and outside designated training airspace. Military commanders have the authority to suspend pilots who willfully violate flight rules, such as flying outside designated training airspace. The military closely manages the airspace they use to ensure they do not exceed planned parameters.

Response to Comment No.20

Since its inception, the toll-free number (800) 582-8507 has helped the ANG to monitor and reduce the number of aircraft noise complaints. All calls to the number are taken seriously regardless of how the caller characterizes the complaint. If callers are not satisfied with the 800-number service, experience future problems with the toll-free number, or feel they are not getting a timely response, an alternative is to call the 140 WG Commander at (303) 340-9555.

RESPONSES TO COMMENTS

Response to Comment No.21

The recommendations from the Working Group, presented in Appendix F, were used to develop the Preferred Alternative. Many of the airspace recommendations included in the Working Group Alternative were incorporated verbatim into the Preferred Alternative and significant portions of the other recommendations also were adopted into the alternative. As such, these recommendations are consequently evaluated in the EIS. The airspace configuration components not adopted were only eliminated after air traffic or environmental conflicts were identified that made their inclusion not feasible. The proposed configuration of military airspace and the route structure were then coordinated with Federal Aviation Administration representatives and is based on its ability to meet existing U.S. Air Force training requirements. The configuration of military airspace for the alternatives considered, including the Preferred Alternative, was derived in part by available unobligated airspace and was designed to avoid airports, instrument approaches, major airways, and known environmentally sensitive areas. The Working Group Alternative has played a very prominent role in the formation of the Preferred Alternative addressed in the EIS.

Response to Comment No.22

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).


Sunrise, Mt. McKinley Ansel Adams

SIERRA CLUB LEGAL DEFENSE FUND, INC.
The Law Firm for the Environmental Movement

1631 Glenarm Place, Suite 300, Denver, CO 80202 (303) 623-9466 FAX (303) 623-80

July 9, 1996

VIA First Class U.S. Mail

Mr. Harry A. Knudsen, Jr., Chief
Planning Branch
Environmental Division
Air National Guard Readiness Center/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

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Comments on the Draft Environmental Impact Statement for the Colorado Airspace Initiative

Mr. Knudsen:

On behalf of the Open Space Alliance, the Sierra Club Legal Defense Fund offers the following comments on the Colorado Airspace Initiative Draft Environmental Impact Statement (DEIS), dated March 29, 1996. In the interest of brevity, we endorse and incorporate by reference the comments of Dwight Bishop and Toni Vikos. Our comments will focus on the DEIS's analysis of airplane noise on animals and wilderness areas located in the affected region.

The DEIS conflicts with the Wilderness Act, 16 U.S.C. § 1331. By using noise guidelines based on urban population densities, the ANG compromises wilderness resources. Thus, we request a revision of the DEIS, utilizing noise standards tailored to the special characteristics of wilderness areas. 1

In addition, the DEIS fails to comply with the standards established in the National Environmental Policy Act, 42 U.S.C. § 2, 3

Bozeman, Montana Honolulu, Hawaii Juneau, Alaska New Orleans, Louisiana San Francisco, California
Seattle, Washington Tallahassee, Florida Washington, D.C.

a member of Earth Share

RESPONSES TO COMMENTS

Response to Comment No.1

The approach used in the EIS has been modified. The Federal Interagency Committee on Noise (FICON), representing a variety of Federal agencies with a mix of concerns associated with aircraft noise, reviewed aircraft noise analyses issues in 1992. This committee's report (FICON 1992) continued an approach to evaluating relative impacts associated with aircraft noise that has been recognized by noise analysis experts as the most widely endorsed and comprehensive approach to aircraft noise analysis available. This approach to noise analysis was incorporated into the analyses associated with the Draft EIS. In general, Federal land use compatibility criteria are derivatives of guidelines first devised for land near airports. All land use compatibility is based on the use of Day-Night Average Sound Level (abbreviated as DNL or Ldn) as the descriptor representing community noise environments. The criteria treat areas below DNL 65 dB as compatible for all uses, including residential, and they treat DNL 65 dB as a threshold for significant exposure. There is no generally accepted method for treating rural areas differently for these purposes.

However, many EIS reviewers, including some members of the Federal regulatory community, felt the application of the FICON standards, and the 65 dB threshold, to a rural setting was inappropriate for such areas with more quiet ambient noise conditions. Consequently, the use of the 65 dB threshold as the sole means to assess relative impacts or the acceptability of noise levels associated with aircraft operations addressed in the EIS has been modified and the analysis now includes additional information to evaluate potential impacts.

Response to Comment No.2

The research completed to support the preparation of the CAI EIS follows the use of various accepted scientific methodologies used to analyze pertinent potential impacts. These analyses have been prepared by qualified scientists and engineers who perform these services for a variety of customers, including the ANG.

4332 ("NEPA"), and the Council on Environmental Quality ("CEQ") regulations implementing that law. Because the DEIS fails to provide the requisite analysis, we request that the Air National Guard ("ANG") prepare a supplemental EIS analyzing the effects of noise on wild and domestic animals or, in the alternative, substantially revise the DEIS to properly address these issues.

I. The DEIS Uses a Noise Standard Inappropriate for Wilderness Areas.

The Day Night Level (DNL) noise criteria and land use guidelines utilized in the DEIS are incompatible with the mandates of the Wilderness Act, 16 U.S.C. § 1131. The Wilderness Act seeks to "secure for the American people...the benefits of an enduring resource of wilderness." 16 U.S.C. § 1131(a). To that end, it defines "wilderness" as "an area untrammelled by man...protected and managed so as to preserve its natural condition." 16. U.S.C. § 1131(c). 4

Nevertheless, the ANG applies guidelines based on urban and suburban areas with moderate or high population densities. Use of these standards allows the ANG to conclude that the CASI does not significantly affect wilderness areas. However, these standards ignore the fact that wilderness areas are fundamentally different and require special treatment. 16 U.S.C. § 1131. Unlike high density urban areas, wilderness areas are low density areas free from the "imprint of man's work." 16 U.S.C. § 1131(c)(1). By using urban noise standards, the CASI obliterates any opportunity for "solitude or primitive" recreation in wilderness areas. 16 U.S.C. § 1131(c)(2). Experts have found that visitors to wilderness areas are less tolerant of noise intrusions in wilderness areas than in more densely populated areas. See Dwight Bishop, Comments on the DEIS for the Colorado Airspace Initiative, at 2.0(b). Thus, the application of urban noise standards to these areas inhibits the "preservation of their wilderness character." 16 U.S.C. § 1131(a). 5

In order to comply with the Wilderness Act, the CASI must utilize different noise guidelines for wilderness areas affected by airplane noise. The guidelines must take into consideration that wilderness areas are to be treated differently and preserved in their natural state. Thus, guidelines must not rely on standards developed for high density urban areas. Rather, the EIS must base its analysis on guidelines that preserve "opportunities for solitude" and ensure the retention of the land's "primeval character." 16 U.S.C. § 1131(c)(2)-(3).

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RESPONSES TO COMMENTS

Response to Comment No.3

Studies conducted on wildlife have shown that numerous wildlife species have the ability to adapt to the presence of man and various man-made sound sources, including jet aircraft noise. While the noise generated from low-altitude military overflights may be initially startling, habituation to jet aircraft noise occurs with most wildlife species. Species-specific responses to low-altitude overflights vary considerably, and responses from individual animals may have the potential to cause injury. However, wildlife populations are usually affected only when a variety of factors work in combination to impact them, including declines or fluctuations in the availability of a food source, habitat destruction or alteration, predation, hunting, trapping, poaching, disease, or inclement weather, rather than noise alone. Normally, it would be unrealistic to predict or attribute any wildlife population declines to a single stressor, such as noise. In addition, no published scientific evidence was identified that indicated harm may occur to wildlife as a result of exposure to the levels of noise generated by military aircraft that would utilize the airspace associated with the Colorado Airspace Initiative.

Response to Comment No.4

The ANG adheres to its "Policy on Air National Guard Overflights of Designated Wilderness and Wild and Scenic Rivers," as presented in Appendix L. This policy is intended to protect specifically identified areas, such as the Sangre de Cristo and Greenhorn Mountain Wilderness Areas, by limiting training operations to no lower than 2,000 feet above ground level whenever possible unless safety of the flight or operational parameters (e.g., weather conditions) may be compromised.

Response to Comment No.5

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.6

Comment noted. Additional analyses pertaining to this subject and incorporating information from this reference have been added to the Final EIS.

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II. The DEIS Ignores Expert Opinion and Fails to Disclose All Major Viewpoints on the Effects of Noise on Wild and Domestic Animals.

The DEIS ignores expert opinion on the effects of airplane noise on animals and, thus, fails to provide a "full and fair discussion" of the impacts of airplane noise on the environment, as required by the CEQ regulations. 40 C.F.R. § 1502.1. The ANG must give the impacts of noise on wild and domestic animals a "hard look" and provide a complete discussion so as to inform decisionmakers and the general public. 40 C.F.R. § 1502.1.

The DEIS ignores the most recent study on the effects of aircraft overflights on wildlife. A National Park Service Report to Congress thoroughly discusses the negative impacts of aircraft noise on various animals. National Park Service, Report on Effects of Aircraft Overflights on the National Park System, September 12, 1994 ("NPS Report"). The report clearly establishes that animals do respond to aircraft overflights. NPS Report, at 5.1. The Park Service goes on to report that an animal's response to airplane noise depends on numerous factors such as the physical features of its environment and its own physiological attributes. NPS Report, at 5.16. Discussion of these factors is noticeably absent from the DEIS.

By ignoring the NPS study, the DEIS fails to disclose all major viewpoints on this issue. The DEIS fails to disclose the fact that experts have documented animals' negative responses, even when airplanes fly at altitudes greater than 1,000 feet. See NPS Report Service, at 5.5-5.11. Instead, the DEIS summarily concludes that noise impacts would prove to be "negligible." DEIS at 4-37. 6

By ignoring a significant body of evidence regarding the potential negative effects of aircraft overflights on animals and wildlife, the DEIS violates NEPA. Accordingly, the ANG must prepare a supplemental EIS which includes the information provided by and the issues raised by the NPS in its report. 40 C.F.R. § 1502.9(c)(ii). At the very least, in its final EIS, the ANG must address these major opposing views. 40 C.F.R. § 1502.9(b).

III. The DEIS Fails to Provide a Meaningful Analysis of the Impacts of Aircraft Noise on Animals.

Because the ANG poorly organized the document, the DEIS fails to provide a meaningful analysis of the impacts of aircraft

noise on wildlife and domestic animals and, thus violates NEPA. CEQ regulations require that environmental impact statements remain "analytic rather than encyclopedic," 40 C.F.R. § 1502.2(a), and that they provide a "meaningful analysis" of environmental impacts. 40 C.F.R. § 1502.9(a).

Although the DEIS contains a large amount of information, its current format impedes any meaningful analysis. The ANG obviously spent a great deal of time gathering and analyzing data. Unfortunately, the information is difficult for those other than noise experts to comprehend and analyze. Rather than provide concise, clear, and to the point information, 40 C.F.R. § 1502.1, the DEIS buries discussion of noise impacts on wild and domestic animals among other technical data. For example, with the current layout of the DEIS, it is difficult to determine whether or not the CASI affects wilderness areas, national parks, or national forests. In order to assess the complete effects of the CASI on wild and domestic animals, a reader must search under each individual MOA. This prevents any meaningful analysis of the cumulative impacts of noise on the environment, particularly the effects on wild and domestic animals.

Reorganization of the EIS and its scientific sources would greatly facilitate understanding and ensure a meaningful analysis of the environmental impacts. Most importantly, it would ensure that the EIS fulfills its purpose of informing the public. Accordingly, the ANG should reorganize the DEIS and include a separate section on the effects of aircraft noise on wild and domestic animals. In addition, the ANG should footnote scientific sources for specific points, rather than place all authority in a bibliography. 40 C.F.R. § 1502.24.

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IV. Conclusion

In light of these shortcomings, the ANG must prepare a supplemental EIS or, in the alternative, substantially revise the DEIS. In order to provide a full and fair discussion of the impacts of airplane noise on wildlife and domestic animals, the ANG must address the issues raised by the NPS Report. Furthermore, the ANG must reorganize the EIS so as to provide a truly analytical report of the effects of aircraft noise on wild and domestic animals. The ANG must make an effort to address these concerns, especially in the face of recent public concern over these issues. Finally, the ANG must utilize noise standards that acknowledge the unique nature of wilderness areas and ensure compliance with the Wilderness Act.

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We appreciate the opportunity to comment on the Draft EIS. Please note that the Sierra Club Legal Defense Fund is a public

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Response to Comment No.7

Every effort has been made to make this EIS as understandable as possible, while still providing the appropriate scientific analysis to allow decision makers to make informed decisions. In accordance with guidance from the Council on Environmental Quality, simple summary information is presented in Section 2, details of the impacts are presented in Section 4, and more complex analyses are offered in the appendices. Each reader may choose to read the level of analysis that is appropriate to his or her familiarity with the subject matter.

Response to Comment No.8

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

interest law firm, separate from the Sierra Club.

Sincerely,

Catalina Serna
Law Clerk
Rocky Mountain Office

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NATIONAL AIRSPACE COALITION

July 11, 1996

Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Ave
Andrews AFB, MD 20762-5157

Enclosed please find the following:

1. Supplemental Review Comments of the Draft EIS for the Colorado Airspace Initiative prepared by me.

2. A Review of DEIS prepared by Alexie McNerthney of Sterna-Fuscata, Inc.

Also, please be informed that early next week, we will be submitting an thorough analysis and critique of the noise methodology used in the DEIS which has been prepared by a recognized acoustical expert. It is our understanding that though the comment period deadline is July 12, you will continue to accept comments after that time.

If you have any questions, please call me.

Sincerely,

Dale Ahlquist
Director
National Airspace Coalition

P.O. Box 394 • Chanhassen, Minnesota 55317 • (612) 949-3301

Supplemental Review Comments
on the
Colorado Airspace Initiative
Draft Environmental Impact Statement

by Dale Ahlquist
Director, National Airspace Coalition
P.O. Box 394
Chanhassen, MN 55317
612-949-3301

I had the opportunity to review some of the support literature and reference material for the DEIS which was housed at the Canon City Library. It is, of course, absurd to think that anyone could read all of this in the short amount of time allotted for the comment period. However, I did note the following: 1

In Development and Application of Procedures to Evaluate Air Quality and Visibility Impacts of Low-Altitude Flying Operations (June 1992) particular concern is expressed for air quality in "Class I" areas, which include National Wilderness Areas. The study concludes that there should be restrictions on aircraft types, frequency of flights, and higher minimum altitudes over such areas. It also says no new Military airspace should be established over such areas. It seems these recommendations were not taken into account in the DEIS. 2, 3

In regards to visibility impacts, this report not surprisingly recommended the same thing: that Class I areas be avoided for low-altitude flying. It also said these things have to be determined on a case-by-case basis. However, there was nothing very scientific about this finding. In fact, the report says, "Because there have been no quantitative standards or measures established to determine what intensity, frequency, or duration of visibility impairment is significant, the criteria for such a determination for this analysis were based on the judgement of an experienced air quality analyst." In other words, they had an air quality analyst evaluate visibility impacts because there was no one else around to do it. It seems that his credentials are no more worthy than those of the hundreds of people who testified that they don't like the looks of F-16s flying against a mountain backdrop. 4

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RESPONSES TO COMMENTS

Response to Comment No.1

The Council on Environmental Quality provides guidelines for the preparation of Environmental Impact Statements, and the review of EISs by the public and various government agencies. These guidelines direct agencies to "allow not less than 45 days for comments on draft statements" (Section 1506.10 of these guidelines). The comment period for the CAI Draft EIS officially opened March 29, 1996 with the Notice of Availability published in the Federal Register. The initial mailing of the statement to over 750 addressees was accomplished on March 20, 1996 prior to the NOA. The close of the comment period was initially published as June 5, 1996 (68 days), and then extended to July 12, 1996 (105 days).

Response to Comment No.2

Because of the many avenues through which the public has received information on the CAI, including both factual and nonfactual information from various sources, some confusion may exist about the existing airspace and proposed new airspace, particularly for the Wet Mountain Valley and the San Luis Valley. The La Veta MOA is an existing airspace. No changes are proposed for this airspace.

VR-413 is also an existing airspace; however, under the Preferred Alternative, its width would be reduced in size and its eastern boundary moved away from the Sangre de Cristo Mountains. The minimum altitude would be raised from surface level to 500 feet above ground level. VR-412, which is currently a low-altitude route through the Wet Mountain Valley, would be eliminated altogether under the Preferred Alternative, thus eliminating low-altitude training completely from the Wet Mountain Valley. Sorties over the Wet Mountain Valley also are reduced under the Preferred Alternative.

Response to Comment No.3

The ANG adheres to its "Policy on Air National Guard Overflights of Designated Wilderness and Wild and Scenic Rivers," as presented in Appendix L. This policy is intended to protect specifically identified areas, such as the Sangre de Cristo and Greenhorn Mountain Wilderness Areas, by limiting training operations to no lower than 2,000 feet above ground level whenever possible unless safety of the flight or operational parameters (e.g., weather conditions) may be compromised.

This calls into question some of the methodology of the EIS. There apparently is a lack of useful and pertinent scientific research on some of the issues, and even some of the so-called "scientific" literature cited is not so scientific after all, or is outdated, or is not directly applicable to our case. It seems that in such instances where the literature is either lacking or faulty or inappropriate, that the testimonies of the affected population should be taken into account and given fair consideration. They have been dismissed as being "biased." The alternative is to consult studies that may be unbiased, but are also irrelevant. The NEPA process requires consideration of the true environment impacts of a proposed action. Sometimes the only people who know those impacts are the ones who have actually experienced them but weren't able to commission a university to confirm their impressions.

Again, the famous cattle study (Espmark 1974) which is used to claim that cattle become acclimated to low-altitude overflights, was conducted under conditions which don't exactly mirror those of southern Colorado. The study was done over 20 years ago in Germany with French planes and English cows. And, in spite of the fact that the cows stopping charging after a certain number of overflights and showed no outward signs of stress, they still registered internal signs of stress, such as an accelerated heart rate. In any case, how is this study more relevant than the testimonies of residents and ranchers of the Region of Impact who have witnessed the actual effects of overflights on their livestock? 5

I also reviewed several other pertinent documents which were obtained through the Freedom of Information Act.

In the Preliminary Final Environmental Assessment for the Proposed Redeye Complex (dated February 1992), there is an Appendix D, with quite detailed maps showing locations of critical wildlife habits and migratory routes for a number of species (golden eagle, peregrine falcon, ducks and geese, osprey, bald eagle, white pelican, Mexican free tail bat, Lesser prairie chicken, Least tern/ piping plover, big horn sheep). Why wasn't there a similar series of maps in the CAI DEIS? There are maps available from the Colorado Division of Wildlife. 6

Similarly, the Draft Environmental Assessment for Redeye Complex (dated September 1991) contains much more detailed information on many aspects of the airspace use than is available in the CAI DEIS.Why? Why is there less information in the CAI DEIS than in the Redeye Draft EA? 7

Here are examples:

-More detailed and specific information regarding emissions (pp.33-35)
-more detailed information on bird strike hazards (pp.51-53)
-more complete information about how often and when flares will be used (pp.17-18)
-all the noise calculations (Appendix B). This is something which we had asked for in the CAI Draft EIS.
-a more thorough discussion of the Impact of Aircraft Noise on Humans (Appendix C - 8

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RESPONSES TO COMMENTS

Response to Comment No.4

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.5

It is possible that aircraft noise could startle domestic animals, especially young or penned animals, and cause them to injure themselves. However, animals adapt and habituate to various sound sources, including jet aircraft noise. Because the airspaces associated with the CAI are mostly existing airspace that have been utilized for over 25 years, this adaptation and habituation to jet aircraft noise has likely already occurred.

Response to Comment No.6

Such detailed information on the exact locations of critical habitat, and associated nest sites, has the potential to cause unwanted intrusions into these areas by humans. Consequently, such data is generally protected from public distribution at the request of wildlife management agencies.

Response to Comment No.7

The research completed to support the preparation of the CAI EIS follows the use of various accepted scientific methodologies used to analyze pertinent potential impacts. These analyses have been prepared by qualified scientists and engineers who perform these services for a variety of customers, including the ANG.

Response to Comment No.8

An additional discussion of human health effects has been added to Volume I of the EIS and can be found in new Subsection 4.13. This new subsection provides more information than previously given in the Draft EIS in Appendix G of Volume II.

which includes a table (Table 3) stating that the threshold of pain is 120 decibels, not 140 decibels as stated in the CAI DEIS. When did the ANG raise the threshold of pain?)

In addition to the question of why we've apparently gone backwards in the amount of information being provided, another question arises: Why was a different EIS contractor used to prepare the CAI DEIS than the one who prepared the EA for Redeye?

The Draft EA for Redeye Complex calls for the elimination of LaVeta Low MOA "due to population build up beneath the area near Interstate 25" (p.19) Whatever happened to that idea? The CAI DEIS says "no significant impact" on the underlying population. Why was population build-up a concern in the plans for the Redeye Complex, but not for the Colorado Airspace Initiative?

Redeye calls for over 1000 sorties in Pinon Canyon MOA. CAI calls for only 61. Is this airspace being fully utilized? Couldn't Pinon Canyon MOA take more of the pressure off LaVeta MOA?

In one of the copies of the Draft EA for Redeye (dated April 1992) which were obtained through the Freedom of Information Act, there appear hand-written notes, one of which says (facing page 1), "What about home/property values? Folks expressed a lot of concern over this!" Well? I repeat the question. And I point out that I have to repeat it.

It is interesting to note that these handwritten comments, which I assume were made by an internal reviewer from either the Colorado Air National Guard or the Air National Guard Readiness Center, express some of the same bafflement and frustration that has been expressed by citizens reviewing the CAI DEIS. Comments such as: "Add much more detailed maps of all areas!" (front cover) "Not a very good summary of what's happening." (lst page) "not clear" (1st page) "wishy washy words!" (2nd page) "Need to spell out what's going on here. People don't understand."(p.1) "This section is confusing. People will not be able to follow the logic." (p.3) "The numbers still don't add up!" (Table 2.1-2b)

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And so on. Different document. Same questions. Even after the dress rehearsals with the Redeye EA, the CAI DEIS still lacks detail, clarity, and logic.

Also, none of the documents for Redeye have any existing numbers of sorties which match anything in the CAI DEIS. Where did the numbers for the "existing" or No-Action Alternative in the CAI DEIS come from?

It is painfully obvious from other documents obtained through the Freedom of Information Act that the Air National Guard never wanted to do an Environmental Impact Statement, which easily translates into one thing: they wanted to get this new airspace and use it without regard to the adverse effects on the environment, on the local economies, on the people over whom they would be flying. Early memos from the Air National Guard Readiness Center showed that Guard considered this proposed action merely a public relations problem and not a possible

Response to Comment No.9

Availability and capability of various contractors dictate how they are used in relationship to all Air National Guard work. In this case, the previous contractor, although capable, did not have enough volume in their contract to accommodate the level of effort needed to perform an environmental impact statement.

The concern for growth along I-25 still remains. Under the Preferred Alternative, LaVeta MOA would remain the same, with I-25 outside the low portion. The training routes traverse I-25 approximately 40 miles from the Airburst Range. It is normal procedure for aircraft to raise their altitude over interstate corridors for safety and noise abatement.

Pinon Canyon MOA, because of Army use, restrictive altitude structure, and relatively small size, limits the types and amount of training that could be accomplished. In discussions with FAA to increase the physical dimensions of Pinon Canyon MOA, they indicated, because of a civilian airway for general aviation aircraft, the current size could not be expanded.

A discussion of socioeconomic factors, including real estate isssues, is addressed in Volume 1, Section 4.9.

Sortie or flight numbers were obtained from the 140 WG based upon their first full twelve months of operation following their conversion to the F-16 aircraft. These are 1993 and 1994 numbers.

The CAI sortie numbers for the 140 WG are based on an annual flying hour allocation of 4,600. This was the same allocation that occurred in FY 94. This posed a conservative estimate since flying hours have year to year variances.

C-130 aircraft are not required to schedule or use military special use airspace or military training routes. To perform their missions, they may fly in the same manner as general aviation aircraft (e.g., Cessna, Beechcraft, etc.) since they are at a speed below 250 knots. As such, they may traverse anywhere in a flying radius of approximately 400 miles from their departure base.

VR-412 exists today and cannot be eliminated from the No-Action Alternative.

environmental problem. They never took any of the objections to the proposal seriously. A Finding of No Significant Impact was a foregone conclusion (ANG memos dated 18 Dec 91, 22 Jan 92, 8 Feb 92, 15 Apr 92) Also, rather than addressing the many public concerns which had been raised, the Guard's strategy was "to nullify opposition groups," and "meet directly with Mr. Redmond and negotiate. . .[because] Mr. Redmond appears to be the main problem and has the wherewithal to bog down the process." Bog down the process? This is the process! The public asks questions, makes objections, declares its opposition, and the Guard is obligated to respond in good faith. A statement like that one does not demonstrate good faith, but rather reveals the Guard's wish to *manipulate* the process and circumvent its responsibilities to the environment and the affected public. The memos and scoping meeting comments and correspondence show that other individuals and citizens groups were very much against low-altitude training in the Region of Impact, but those voices were not of concern to the Guard because they did not represent "deep pockets." What does it say about the democratic process if only those with "deep pockets" have any influence over the proposed activities of a governmental agency?

These memos also reveal the Guard's lobbying efforts with Congresswoman Pat Schroeder to get support for the Guard's plan. It seems to me not only bad form, but unethical and possibly illegal for a governmental agency to lobby an elected representative.

Other evidence that the public is being disregarded and dispensed with rather than acknowledged and accommodated is revealed in an undated point paper from Jack Kier on the "Open House" Format for Scoping/Public Hearings, which demonstrates an attempt to control the media and to frustrate citizens who wished to share their concerns in a public forum. The same memo says the Open House format is more expensive and time-consuming. Yet it claims that more of the public is heard in this format. But there is no supporting evidence that this is true. And does the Guard really want to hear the public? I do not ask this question flippantly. I ask it because of a troubling "Internal Working Document" (undated) which says on the first (unnumbered) page under the heading 'Public Involvement': "The public MUST PERCEIVE that they have a voice (either direct or through officials/agencies) in activities with potential for impacting their livelihood," (emphasis in the original), which is certainly not the same thing as saying, "The public MUST HAVE a voice. . ." In the same document, there are several pages of potential questions and possible answers on the issue, along with the reviewer's notes critiquing the answers. Most of the questions are pointed and accurately reflect the public's concerns. Most of the answers are vague and condescending and less than informative. Perhaps the most telling is the final one:

> Q. Are Colorado officials sacrificing our state wilderness and the economy of its rural population to a plan to become a military-based economy? Is our wildlife paradise, which now serves visitors and residents from throughout the world, to become a wild pilot's barren paradise?
>
> A. With all due respect, based on replies we've provided to many of your previous concerns above, [the] answer to both parts of your question is no.

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RESPONSES TO COMMENTS

The environmental assessment for the Airburst Range did conclude with a Finding of No Significant Impact. Copies of both documents should be available at Fort Carson's environmental planning office.

The Governor's recommendations included a request to examine the long term viability of Airburst Range. The Air National Guard has honored this request.

The Airburst Range EA was accomplished as a result of a request by Fort Carson to perform such an effort.

At this time, there are no issues that would lead to the immediate closing or reduction in use of the Airburst Range.

The hand-written comment next to this is, "Bad answer."

I would agree. I still haven't seen another answer, much less a good answer.

Nor have we seen an answer to the question raised in the technical working group, which is also noted in these documents:

> How can the Air Guard Bureau propose an increase in training airspace and an overall sortie quantity increase of 70 percent for an Air National Guard wing that has just experienced a 25 percent reduction in aircraft allotment? How do you explain this apparent disparity?

In a Briefing on the Colorado Airspace Initiative EIS dated July 12 and 13, 1993, it says under a heading 'Proposal - Overall': "All airspace in Colorado that is utilized by the Colorado Air National Guard or by other entities and that coincides with the proposal will be assessed for cumulative impacts even if it is not part of the Colorado Airspace Initiative."

This has not happened. It has been pointed out by many reviewers of the DEIS, including the Fish and Wildlife Service, that the cumulative impacts simply have not been taken into account in the development of the DEIS. For instance, C-130 flights from Peterson AFB, Helicopters from Ft. Carson and Ft. McCoy, etc. add to the cumulative impact of overflights. (This requirement is confirmed in the document 'Statement of Work to Perform an EIS. . .140 Fighter Wing' dated August, 1992: 2.4 "Noise analysis for aircraft operations will be required for this study, including military activity from all DOD users.") This hasn't happened in the DEIS.

The Briefing also states that even under the No-Action Alternative, VR-412 cannot be used because its use would violate ANG policy regarding overflights of Wilderness Areas. So VR-412 should be deleted from all the alternatives, even the so-called No-Action Alternative.

In a memo to the Record on the "REDEYE Complex EIS Planning Meeting," dated 14 September 1992, it is noted that the Army had denied use of Airburst Range to the 140 FW until an Environmental Assessment was completed with a Finding of No Significant Impact (FONSI). Did this ever happen? May we see the EA and the FONSI? How was it possible to get a FONSI if earlier documents authored by the 140 FW said that Airburst Range was already "supersatured environmentally"? The memo also states in capital letters, "AIRBURST AND REDEYE ENVIRONMENTAL PROCESSES AND DOCUMENTATION SHOULD BE KEPT SEPARATE." Why? Why should they have been kept separate? Are they not part of the same action? Isn't the 140 FW going to use both the airspace and the range as part of the same training mission? Why aren't these connected? Why haven't they been connected all along? It seems the Guard wants to avoid this thorny issue. The real question is, Why are there no real alternatives being considered which involve establishing a new range to replace Airburst? This is the heart of the controversy and in it lies the key to solving the problem. But the immediate concern is that the CAI EIS is flawed and incomplete because it does not include the use of Airburst Range in its assessment, nor any real alternatives to using it.

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The memo also notes the comments of Gen. Reid, who said, "Don't go after airspace you don't absolutely need; there are some areas that we simply shouldn't be flying over." I would submit - and this is confirmed by letters and testimony and public comment from hundreds, perhaps thousands of Colorado citizens - that one of the areas that simply should not be flown over is the pristine and serene Sangre de Cristo and Wet Mountains and their surrounding valleys.

In another document regarding Airburst Range (undated, entitled 'General Information (Governor's Working Group Recommendation)'), it refers to the Range Study to determine the long term viability of Airburst Range. The study is to be conducted "strictly from an operational/tactics point of view. No environmental issues will be included." This again flies in the face of the reasons for having the study. It ignores the earlier admission that the range is "supersaturated environmentally." And it betrays the reasons behind keeping the use of the range out of the EIS. This document also claims that Airburst, while not perfect, is at least adequate to accommodate current training requirements, which flatly contradicts earlier Redeye documents (such as Initiative 2010) which bemoan the fact that Airburst does not meet current AF requirements and is operating on a waiver. So which is it?

In the Public Relations literature, there is a great emphasis on addressing the "misinterpretation" of the Guard's plans. It claims that "educating" the public will allay what is merely a "fear of the unknown." However, the fact is, as was demonstrated in comments at the scoping meetings in 1993 and the public hearings in May of 1996, that military overflights are not an unknown to the residents and property owners in the Region of Impact. And that's exactly why the people are so concerned. As one speaker said, "Everybody here has had a bad experience with overflights. Everybody here has had an incident." The particular incident she described was her horses being spooked by a low-flying military jet and the dangerous situation it caused. Other "incidents" described by other speakers were riders being thrown from horses, livestock charging through fences, children being terrified, and so on. These people knew what they were talking about. They weren't making these things up. Their discomfort with this proposal is not from a fear of the unknown but from a fear of the known. They know what the real problems are with military overflights. And they are facing an action which will increase those problems because of increased overflight activity. Nobody is comforted by this airspace plan.

Here is a typical comment which epitomizes the troubles people have experienced and the problem with the entire airspace proposal. This is from the transcript of the Scoping Meeting in Rye, August 5, 1993:

> MR. RANES: I had some technical information to offer, but it's emotional for me. . . I've been living with this for 20 years now, and I think some people at Rye, it's going to be newer to them, because you haven't really had as many overflights as we have in Huerfano Valley.
>
> Our ranch happens to be right at the apex, Point G. So we're looking forward to more instead of less.

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> I've been complaining about these flights for all these years I've ben there. But I just had to share with you that it's incredible; it's an incredible drama for me. I've been hoping this would get easier, and instead, it's getting worse.
>
> My basic question is. . . why we only have one bombing field. You see, my understanding is all these flight patterns are all dependent on this one bombing area in Fort Carson.
>
> Why do we have to have this bombing area right here in the middle of the front range in Colorado?
>
> If this bombing field wasn't here, we wouldn't have this. It wouldn't be necessary to have these flight patterns over our homes.

These comments were made three years ago at a scoping meeting. The speaker - a humble rancher - got right at the main problem then, it was never addressed, and it still hasn't been addressed.

Similarly, other comments at the scoping meetings were absolutely ignored in the DEIS. In arriving at a Finding of No Significant Impact, the Guard had to find a way to disregard this testimony from the Penrose scoping meeting, August 2, 1993:

> MR. CARUSO: . . . I live on the east side of Fremont County, about a mile west of Pueblo County. . . approximately four miles due west of Fort Carson.
>
> We moved out to Penrose a year and a half ago. We were unaware of the problems with the flight pattern. But on numerous occasions, I've seen the F-16s. . .drop well below the canyon walls into Beaver Canyon and then come back up.
>
> I've. . . seen these aircraft circle around us . . . I have watched it. . . for two or three hours.
>
> My concern is that in that area in a square, I would say about a half square mile, there are close to 20 residents, quite a few people. And I've got a young son, two years old, and whether you know it or not, those boys, those jets, when they're flying, they hurt his ears to the point where he goes into a fit.
>
> Now, I care about the environment and everything else, but my concern are my kids. And when it comes to point where they. . . hear a plane and go berserk, there's a problem. . .

No Significant Impact?

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A general concern raised at the Scoping Meetings was that people live and recreate in the Region of Impact specifically because of the peace and quiet. The sudden and excessive roar of military jets is utterly antithetical to the quiet environment of the area. In some cases, however, this was more than a merely general concern. One gentleman, Rev. Wayne Ewing, established residence in the Westcliffe area precisely because his wife was suffering from a debilitating disease and needed tranquility. In his comments, he made a very specific request for information (at the scoping meeting in Westcliffe, August 3, 1993):

> You simply must make clear what the adverse effects of unexpected noise are on those persons we serve who are chronically, mentally ill, who suffer from bipolar disease, manic depressive disorders, borderline and multiple personality disorders, agitated children and adolescents within dysfunctional families, and other mentally diseased persons who are affected by sudden and disruptive noise. You simply must make this known.

The DEIS, however, provides absolutely no information on these points. I ask that they be specifically addressed in the Final EIS. Along the same lines, other speakers at the Westcliffe Scoping Meeting raised the issue of the documented adverse health effects related to noise-induced stress. Although this issue was only cursorily referred to and set aside in the DEIS (in a mere footnote!), specific requests and questions were put forth, such as a survey of the populous in the Region of Impact to determine residents' health conditions that may be particularly susceptible to the adverse effects of noise-induced stress.

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Other testimonies during the scoping meetings in Westcliffe, Rye, Penrose, and Moffet raised specific concerns which were not addressed in the DEIS which we insist be addressed in the Final EIS. This includes but is not limited to:

-Economic impacts on the building industry. The top contractor in Custer County testified that buyers were holding off making buying and building decisions until knowing the outcome of the MOA issue. A second-property owner testified that he would not have bought property and built his cabin if he had known about the Guard's plans.

-Economic impacts on the ranching industry. A rancher testified about the opposition to the Guard's plans from the Custer County Stockmen and the Colorado Cattleman's Association. Why would these professional organizations opposed the Guard's plans? He also testified that he owned ranches in both the Wet Mountain Valley and at Pueblo West, which is also under a MOA. While the noise under the MOA at Pueblo West is still too loud to hold conversation, it is less intrusive because it is over a wide open expanse. And the cattle are not bothered as long as they're not penned in. In the Wet Mountain Valley, however, noise is a much bigger factor, both for humans and animals. The noise is amplified by the mountains, and the cattle are often penned up, and quite distressed. He was speaking from personal experience.

11

-Impact on the wolf population at Mission Wolf Sanctuary.

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RESPONSES TO COMMENTS

Response to Comment No.10

An additional discussion of human health effects has been added to Volume I of the EIS and can be found in new Subsection 4.13. This new subsection provides more information than previously given in the Draft EIS in Appendix G of Volume II.

Response to Comment No.11

Impact to the economy have been studied in the EIS as part of the evaluation of socioeconomic impacts and the results are presented in Subsection 4.9. There are a number of factors, other than aircraft operation, that may affect the building and ranching industries, including the general economy, the proximity of other investment opportunities in the area, and a variety of other factors such as weather conditions and market competition. While it is possible that some individuals in the second home market or local ranchers in an area may find an aircraft overflight to be annoying, no significant change to these industries would be expected considering the fact that the majority of the CAI airspace has existed for many years and the relevant influences from military aircraft operations are not changing in the study area.

Response to Comment No.12

The wolf population at the Mission Wolf complex was not analyzed due to these wolves being captive-bred and raised by humans. The gray wolf does not naturally occur, nor has it been introduced by the U.S. Fish and Wildlife Service within the region of influence for the Colorado Airspace Initiative.

-Impact on the many spiritual retreat centers in and around Crestone, where silence is an integral and essential part of the reason people come from all over the world to this area for spiritual retreats. 13

-Impact on "social and political health." There is a pervading frustration that citizens' concerns are not being addressed. More to the point, the overwhelming opinion was that citizens felt they were being sold something they clearly didn't want to buy. This creates resentment and mistrust not only against the military but against the government in general.

These were not vague or hysterical or hypothetical concerns. They were articulate testimonies about actual experiences and real events. They must be taken into consideration and any Finding of No Significant Impact must be defended against these accounts.

I attended four of the seven public meetings which were held in Colorado in May, 1996, which were for the purpose of giving the public the opportunity to respond to the DEIS. In general, there were a lot of not nice things said about the quality of the DEIS. "Word salad with a lot of dressing." There were several calls to start the whole process over, for the DEIS to be redone, for a congressional investigation. There were complaints about the format of the hearings, the five-minute time limit, and the locations of the meetings, all of which were perceived to impede public input. However, there were also a lot of specific, substantive remarks which I wish to re-iterate. This is testimony which we insist once again must be specifically addressed in the Final EIS: 14

-The most constant complaint was with the 24 hour noise averaging. Several colorful metaphors were used to describe the absurdity of this method to measure the impact of noise in a quiet environment. ("It's like saying if you have your head in the oven and your feet in the freezer, your average body temperature is normal." "It's like saying that if I haven't had any pain for five years and now the doctor says he's going to take out my appendix without any anesthetic, because based on the five year average, I shouldn't feel any pain!") 15

-A fireman in Crestone said there is "an incredible danger from fire" in the San Luis and Wet Mountain Valleys. If a F-16 crashed, the whole mountainside could go up in flames. The firemen in Crestone were never consulted by the ANG, never asked if they were prepared to fight such a fire. They were only told - via the DEIS - that training was available. 16, 17

-A schoolteacher from Crestone reviewed the original EA for VR-413 which said it wouldn't have impact and wouldn't be controversial. It *has* had impact and *is* controversial. What now?

-Those who were able to wade through the DEIS noted that portions of the DEIS are listed verbatim from 20 year old documents. Where is the original and relevant analysis? 18

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RESPONSES TO COMMENTS

Response to Comment No.13

The EIS has evaluated cultural resources, such as historic or Native American sites, by consulting with the appropriate state representatives and local experts to obtain an understanding of the resources present in the study area and to determine whether any possible impacts exist. Some religious and/or meditation centers are under existing airspace. Consequently, the elimination of VR-412 and the changes to VR-413 under the Preferred Alternative, which raises the minimum altitude from surface level to 500 feet above ground level and reduces the route width from 12 miles to 6 miles, should be beneficial to such locations.

Response to Comment No.14

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.15

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

Response to Comment No.16

The fire potential associated with aircraft overflights is generated from the potential for an aircraft crash or the use of flares in training. The EIS evaluated the potential for an aircraft crash resulting from the proposal. This evaluation determined that the likelihood of an aircraft crash would be very low. Therefore, the potential for a fire resulting from an aircraft crash would also be very low. In fact, military accidents have declined in the past decade, as described in the February 1996 report of the General Accounting Office, an organization under the U.S. Congress.

Authorized users of the airspace have proposed the continued use of flares in their training. However, the flares would not be released below 2,000 feet AGL. Once a flare is released, it ignites immediately. The burn time for a flare is approximately 4.0 to 4.5 seconds. In those 4.0 to 4.5 seconds, the flare falls approximately 500 feet. This leaves a safety margin of approximately 1,500 feet to allow for a flare that burns for more than 4.5 seconds to extinguish itself. The 140 WG has no knowledge of any fires being caused by flares released during current training missions by any aircraft utilizing Colorado Airspace Initiative airspace.

Response to Comment No.17

Initial response to an aircraft accident is the responsibility of the civilian authorities nearest the crash site, who would provide emergency services such as fire, police, and medical assistance, as necessary. It is the responsibility of the civilian unit responding to an aircraft accident to determine what response actions they are capable of performing, including the evaluation of proper personnel training and response equipment. If the responding unit is not capable of performing certain response actions, they should request assistance from the nearest civilian unit capable of performing the required response. In the event of an aircraft accident, the nearest USAF installation would be notified by these authorities. In most cases, the nearest USAF installation would have been previously notified by the USAF unit associated with the downed aircraft. Upon notification of the aircraft accident, the commanding officer of the nearest USAF installation dispatches a Disaster Response Force. The Disaster Response Force includes personnel who have been trained to respond to this type of occurrence, and would include disaster preparedness, security police, medical, fire department, legal, munitions, mortuary, and others as required. The Disaster Response Force would assist local response teams in matters of fire suppression, site security, medical treatment and evacuation, accident evaluation and investigation, retrieval of classified materials or equipment, and protective measures, such as munitions disposal and hazardous/toxic materials protective measures. When necessary, the Disaster Response Force would coordinate activities with other regional response forces to ensure all personnel and equipment are obtained for proper mitigation and control of the accident site. It is the ANG policy to provide training, upon request, on aircraft accident emergency response to any recognized emergency response agency.

Response to Comment No.18

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.19

In-flight refueling activities would be used in airspace associated with the Colorado Airspace Initiative. Normally these activities are performed for training purposes rather than to extend the duration of an individual sortie. In-flight refueling skills are an essential element of pilot training. Air refueling is addressed in Volume II, Appendix N.

-Refueling in the air has not been addressed in the DEIS. 19

-COANG would not establish a MOA over Vail or someplace that would affect the state ski industry, yet they don't care about affecting the ranching and cattle industry. 20

-A member of the Crestone-Moffat Business Association expressed concerns about economic impacts. Thirty percent of businesses in the area depend on tourism. 21

-Guests at Historic Pines Ranch (a riding ranch near Westcliffe) have said they won't return because of the experiences with low-flying military jets. The animals have also been affected.

-A gentleman with a PhD in Audiology said, "The sound study is a disgrace." He testified that permanent hearing and ear damage can result from noise levels at 128 dB, which the DEIS has indicated could occur. He does not want his grandchildren exposed to these kind of noise levels.

-Many complaints have been registered to Buckley ANGB about violations, but officials at Buckley could not identify where the planes were from.

-"Anybody who's been around horses knows that it's absurd to say overflights don't have a significant impact on horses." 22

-"They [ANG and AF] are not to use their wartime tactics on the citizens they're supposed to protect."

-Highway 17 is a Hazardous Materials Highway. Has this been taken into consideration in the safety analysis?

-An acoustical consultant said that the Ldn "is not a good predictor of impact." There were over 40,000 complaints about noise from DIA in the first 12 months of operation in spite of an EIS that used the Ldn to support a finding of "No Significant Impact." Other methods of noise analysis are available.

Two final notes about the DEIS:

It should be pointed out that none of the noise monitors used in the noise test in the DEIS were located under the turning points in the MTRs or MOAs, where the noise is definitely higher due to the higher power settings and acceleration after the turns. Thus, we didn't get a true picture of the actual noise impacts. 23

Finally, we insist that the No-Action Alternative in the DEIS does not truly represent existing 24

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RESPONSES TO COMMENTS

Response to Comment No.20

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.21

The role of tourism in the local economy, and its impact from the alternatives associated with the CAI, have been studied in the EIS as a part of the evaluation of socioeconomic impacts. There are a number of factors, other than aircraft operations, that may affect tourism and the use of recreational areas, including weather, the proximity of other attractions in the area, and the economy. While it is possible that a tourist visiting an area may find an aircraft overflight to be annoying, no significant change to the tourist industry would be expected considering the fact that the majority of the CAI airspace has existed for many years and the relevant influences from military aircraft operations are not changing in the study area. The contribution of tourism earnings to total industry earnings was presented in the EIS for each airspace. In all instances, these values were very consistent with overall state levels of tourism earnings as compared to industry earnings.

Response to Comment No.22

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.23

Noise monitors were located, in coordination with local citizen groups, at representative noise sensitive positions. They recorded all sounds at each location, including those which would have been associated with maneuvers and power variations.

conditions for the past five years in the Region of Impact. The No-Action Alternative would, in fact, be a major change from the existing conditions. Although the DEIS claims that the number of sorties in the Preferred Alternative would actually be less than those in the No-Action Alternative, the fact that existing conditions and the No-Action Alternative are different is betrayed on page 4-159 of the DEIS, where it says in black and white: "the number of sorties proposed is a marked increase from existing conditions."

Thus, the DEIS has failed to demonstrate the true impacts of the Guard's airspace proposal.

Response to Comment No.24

The reference to page 4-159 of the DEIS identifies a discussion of one airspace (IR-409) used as an example of the variations in cumulative sorties that would be present along a route. At Point H of IR-409, in the very northeast corner of the La Veta MOA, where the route of IR-409 is coincidental with other airspaces, there would be an increase in cumulative sorties. This information on cumulative sorties was given in Appendix N of the Draft EIS. The reference to "increase from existing conditions" does not refer to all airspaces. Under the Preferred Alternative the number of sorties would decrease from 5,441 sorties to 4,909 sorties.

Review of document: Draft Environmental Impact Statement for the Colorado Airspace Initiative, March 1996

prepared by: Alexie M. McNerthney

Sterna Fuscata. Inc., Fort Collins, Colorado

June 23, 1996

prepared for: National Airspace Coalition

The following review of the Draft EIS for the Colorado Airspace Initiative was prepared by Alexie McNerthney, Principal Biologist for Sterna Fuscata Environmental Consulting, Inc., Fort Collins, Colorado. McNerthney has addressed exclusively the effects of aircraft activities on wildlife for five years. In her capacity as the Principal Biologist for SFI, she has advised clients on airport development and flight operations to avoid negative impacts on wildlife. She co-authored a 1994 Report to Congress on the current status of impacts on wildlife from aircraft activities in the U.S.

This review concentrates on the impacts of CAI activities resulting from the preferred action alternative. Consideration is given to the analysis and conclusions for impacts to wildlife, threatened and endangered species, and state sensitive species. This review critiques methods for arriving at conclusions about negative impacts. This review does not address impacts to persons, economy, recreational values or other resources. 25

General Comments

For each MTR and MOA, and for each alternative, the EIS concludes that there will be no avoidable adverse impacts to wildlife and T&E (threatened and endangered) species. Considering all of the activities planned for MTRs and MOAs, all of the important wildlife and T&E species inhabiting the Region of Influence (ROI), and all of the concern expressed by wildlife agencies about impacts, and all of the evidence suggesting disturbance causes problems for wild animals, it is absurd to make this claim. The approach to impact assessment with regard to wildlife is far too simplistic. The analysis suffers from several other problems as well: the 26

RESPONSES TO COMMENTS

Response to Comment No.25

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.26

Responses to these summarized issues are addressed in the responses to the corresponding detailed subsections of Ms. McNerthney's letter, starting on page 2 of her letter.

most prominent problem being a reliance on limited literature. Several faulty assumptions are made about wildlife and impacts. These include the following: 1) no information equals no impacts. 2) animals can be expected to respond to sound the way humans do. and 3) animals readily habituate to overflights. None of these assumptions are correct. and to assume that they are demonstrates an ignorance of the subject of wildlife and disturbance. It is unclear why a more thorough analysis was not conducted in the generous amount of time that was allowed for preparation of this DEIS. What follows is some general comments on the problems associated with the analysis. so that these problems may be corrected prior to release of the Final EIS.

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Selection of literature for review

The analysis is weak because it relies on very general statements made in second-hand reports about aircraft disturbance to wildlife. rather than on original studies. Unfortunately. the reference most often relied upon is itself poorly-prepared. This is a Report to Congress. prepared for the US Forest Service in 1992. This document is very brief and general: the section pertaining to impacts on wildlife covers only five pages. This document cites only a few references while making broad judgments about animals and their responses to aircraft. It is unclear why the ANG relied on this report to make claims about impacts and not the Report to Congress prepared in 1994 for the National Park Service. which covers 82 pages and provides a very in-depth analysis of the issue. and cites over 100 references (McKechnie and Gladwin 1994). 27

Few studies exist regarding impacts to the species of concern in the ROI. This presents a challenge for the analyst because there is so little information upon which to draw conclusions about the range of possible impacts for the CAI. In this case the ANG would benefit from discussions with professionals who deal with animals and disturbance; their opinions would be valuable in the absence of published information. For example. Dr. Valerius Geist is a world-renowned ungulate biologist who has studied bighorn sheep for decades. He has much to say about possible effects of disturbance from overflights; yet he was not contacted. Nor were any raptor experts contacted to get their comments on the work by Ellis. No experts on any of the endangered species inhabiting any of the ROIs were contacted: surely they would have some information on how sensitive certain species are to disturbance. 28 29

In addition to interviewing experts on the subject of wildlife and disturbance. the ANG would be able to better predict impacts by asking questions before blindly citing references to make claims about impacts. Pertinent questions to ask are: 30

RESPONSES TO COMMENTS

Response to Comment No.27

Comment noted. Additional analyses pertaining to this subject have been added to the EIS. See Subsection 4.6 of Volume I of the Final EIS.

Response to Comment No.28

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.29

Several experts were contacted regarding the potential impacts of the Colorado Airspace Initiative on raptors, as well as threatened and endangered species. Dr. James Enderson, Colorado State College, and Jeff Selleck, The Peregrine Fund, were contacted regarding potential impacts on the peregrine falcon. Richard Reynolds, U.S. Department of Agriculture, was contacted regarding potential impacts on the Mexican spotted owl. In addition, numerous U.S. Fish and Wildlife Service and Colorado Division of Wildlife biologists were contacted. See Appendix Q.

Response to Comment No.30

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

1. Does this study replicate overflight conditions that will occur in the Colorado Airspace Initiative? Was this study properly-designed. with controls and replications?
2. What were the limitations of this study?
3. Was it published in a peer-reviewed journal?
4. Who conducted the study. who funded it. and was it biased in any manner?

It appears from the list of references that only those that suggested impacts do not occur. were cited. Yet several of these were not published in peer-reviewed journals. and others were very limited in scope and did not test wildlife under conditions as they will occur in the CAI. The bison study is given much discussion. yet no scientists were involved in study design or implementation! It was poorly-designed and cannot even be considered a study at all. but merely a series of anecdotal observations. Comments of the ranch hands and other persons involved. suggest they were very biased to begin with. This does not set the stage for solid science. -31

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Use of sound metrics for analyses of impacts

It is reasoned that because L_{dnmr} values will fall below the accepted standard of 65 dB in each MTR and MOA. negative impacts to wild animals and T&E species are not anticipated. Yet there is no evidence that disturbance does not occur when L_{dnmr} values fall below 65dB. for any species. While useful for describing the general "ambiance" of an area under an MOA or MTR. this metric. based on an A-weighted scale. cannot be used to predict disturbance in animals. This metric is designed specifically for use in determining human levels of comfort near airports: it has nothing whatsoever to do with wildlife in wild areas. Animals do not hear sound the way humans do. Instead. different species perceive sound at different ranges of frequencies and amplitudes than humans do. For example. there are several reports of animals responding to approaching aircraft long before human observers detect the aircraft themselves.

It is entirely unclear why the ANG chose to use L_{dnmr} levels to make claims about wildlife in the first place. because animals are disturbed by sudden onsets of loud noise such as that generated by low-level overflights. which is not reflected in the L_{dnmr} metric. SEL values. which reflect the number of times that noise levels exceed 65dB. might be a more meaningful indicator of how animals will experience aircraft noise in their environment. As described in the DEIS. SEL values will change under the preferred option for most of the MOAs and MTRs. Some areas will experience SEL values similar to present conditions. and some will experience a reduction in values. Yet the Cheyenne MOA. the Airburst MOA (A. B and C). the F-end of IR- -32

RESPONSES TO COMMENTS

Response to Comment No.31

The "Bison Study" presented in Appendix J was intended simply to observe the reactions of the bison to low-altitude F-16 overflights and to determine if a herd stampede was likely to occur. This observational study was accomplished at the request of certain members of the Citizen's Working Group. Members of this Working Group were invited to participate in the observations. In addition, several media representatives were present to observe the overflights. The observational study was never intended to evaluate other behavioral or physiological reactions of bison to aircraft overflights. The EIS authors relied on other existing published studies based on more detailed scientific methodologies to provide information on various other behavioral or physiological reactions of animals to aircraft noise.

Response to Comment No.32

The analysis of the potential impacts to wildlife associated with the Colorado Airspace Initiative included a comparison of the existing noise environment to the modeled noise environment of the Original Proposal and the Preferred Alternative. The models predicted not only the Day-Night Average Sound Level (Ldn), but also the number of daily noise events that exceed a 65 dB Sound Exposure Level (SEL). The assessment of the predicted change in the noise environment on wildlife was augmented by interviews with wildlife biologists and resource managers, several studies conducted specifically for this EIS, as well as an extensive literature review. All references to the 65dB noise level as a "benchmark" to analyze noise impacts to wildlife have been removed from the Final EIS.

409, VR-413, IR-414, XIR-424, IR-415 and XVR-1427 all will have double or more the number of overflights per day. It is doubtful that sensitive wild animals in these areas will go unaffected by these changes.

There appear to be other problems with the use of noise metrics throughout the DEIS. Some measures do not make sense. Specifically:

1. The annual number of sorties will increase by 50% in the Pinon Canyon MOA, yet the SEL level for this area is predicted to decrease slightly. 33
2. Minimum flight altitudes in the La Veta MOA will be reduced from 1,500' to 300' (low) and 13,000' to 300' (high), yet the SEL level will somehow stay the same. 34
3. The 2 Buttes MOA currently does not exist; how can the SEL level remain the same in this area once it is in existence? 35

Perhaps any noise metrics alone are useless for determining disturbance to wildlife. A much more direct measurement of the potential for impacts would be the number of low-level jet overflights in MTRs and MOAs, and the amount of time that aircraft will spend in MOAs conducting training and maneuvers. I caution that this alone will not give a definitive answer to the question of impacts, because there is no known threshold for the number of overflights which constitute disturbance. Similarly, there is no flight altitude threshold under which overflights are known to cause disturbance, although most research indicates that overflights below 500 feet AGL do disturb most species that have been tested. 36

Reliance on the habituation hypothesis

The DEIS claims that "animals appear to habituate readily to one to five aircraft approaches per day" (p. 4-125). This has never been demonstrated during any study, and certainly it is a gross generalization since animals appear to be quite variable in their sensitivity to overflights. Yet this habituation argument is used to claim that impacts will not occur. In fact habituation does not always occur, and there is a limit to the amount of noise to which animals can habituate. Only two studies by Rory Lamp (1989) and Guy Workman (USUF 1992) are cited to support the habituation hypothesis. Yet neither of these studies demonstrate habituation. 37

Lamp recorded responses of bighorns to eleven military jet overflights in an MOA at Fallon Naval Air Station. Flight altitudes were generally below 3,000 ft. AGL, but only one overflight was conducted at the very low altitude of 100 ft. AGL-- and during this overflight, the animals did panic and run. This does not suggest that animals habituate. Instead, it suggests that

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RESPONSES TO COMMENTS

Response to Comment No.33

Noise levels for Pinon Canyon MOA are projected to increase, not decrease.

Response to Comment No.34

Configuration for the La Veta MOA will be unchanged under the Preferred Alternative.

Response to Comment No.35

Cumulative assessment includes airspace use which is not part of the Colorado Airspace Initiative. Noise levels at this location are from the existing IR 177.

Response to Comment No.36

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.37

Comment noted. Additional analyses pertaining to this subject have been added to the EIS. See Subsection 4.6 in Volume I of the Final EIS.

animals panic in response to very low-level overflights. The animals lived in the ROI and had plenty of prior experience with jet aircraft overflights; if they were to habituate to overflights, they would have done so by the time this study took place.

Workman's studies were conducted on penned animals that were subjected to overflights of 500 ft. AGL. Heart rates were monitored. Heart rates tripled during the first overflight and then increased to a lesser magnitude during subsequent overflights. One might think this shows habituation, but the problem is that the trials were conducted very close together (i.e., all over the course of a given morning) so that we do not know how animals respond to overflights that are independent of one another.

The only scientific, sound study that suggests any animal group can adapt to military jet overflights is that by Ellis, who showed that nesting raptors such as eagles and falcons living in an MOA appear unaffected by overflights. Even in this case, however, we do not know if the birds are stressed by overflights; we only know that they do not leave their nests as jets pass over. This is an adaptive response as birds protect their eggs and young from perceived danger. Long-term effects are not known.

Animals have been shown to habituate to several types of overflights, but no studies show they can habituate to low-level military jet overflights such as will take place in the La Veta, Airburst, Two Buttes MOAs and all of the MTRs. For example, colonially-breeding birds in Florida never adapted to infrequent low-altitude military jet overflights (Black et al. 1984). Several other studies show that animals did not habituate to low-level overflights over the course of several breeding seasons (Ward and Stehn 1989, Harding and Nagy 1976, Reynolds 1974, Brown 1990). These studies are not mentioned in the DEIS. It is erroneous to claim that no impacts will occur because animals habituate to overflights.

<u>Emphasis on short-term behavioral responses</u>

The ANG appears misled by several studies showing that, when animals do respond to overflights, the responses are short-term. The behavior of an animal immediately after an overflight does not measure other important things such as activity budgets, habitat use or physiological stress. Many well-designed studies demonstrate that, while behavioral responses are short-term, long-term changes in activity budgets and habitat use are apparent. Also, behavioral responses alone are not necessarily reliable indicators of chronic stress (i.e. Chesser et al. 1975).

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continued

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Long-term effects are probably subtle if they do exist, but they may also be significant. For example, researchers have calculated that overflights at 2-hour intervals over the course of a day during the staging season for waterfowl causes short-term interruptions of feeding, but that the consequence of this is that individual birds will have a 20% reduction in energy reserves at the onset of migration (Davis and Wisley 1974). Similarly, waterfowl energy losses based on rates of reductions in feeding rates in the presence of aircraft translate to birds beginning migration at 96% of their normal weight. These studies are significant, yet not discussed in the DEIS.

One of the most important effects of disturbance that has not been addressed is habitat avoidance. In some cases, animals may fail to colonize suitable areas because of human activities. We can only hypothesize about whether low-level jet overflights cause this problem but it should be considered as a risk in the DEIS, particularly for animals that are on the fringe of their habitat in Colorado such as the lesser prairie chicken.

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The assumption that no information equals "no impact"

The analysis correctly notes that little or no information exists on how most species in the cumulative ROI respond to military jet overflights. However, the conclusion drawn is that no impacts are expected to occur. This is faulty logic. 38

We cannot say with certainty whether increased exposure to chronic overflights will cause stress in the many animal populations of the cumulative ROI. However, a review of studies indicates there is a moderate risk that some populations will be affected. For example: 39

- Studies of bighorn sheep show that their daily activity budgets are altered in the presence of helicopters (Stockwell and Bateman 1987); certainly military jets could cause the same result.
- Studies of waterfowl showed feeding is disrupted in the presence of all aircraft types (Ward and Stehn 1989).
- Populations of ungulates, particularly bighorn sheep, are experiencing the secondary effects of stress in Colorado, such as decreased resistance to disease.
- There is some evidence that overflights cause ungulates and waterfowl to alter their patterns of habitat use (Schweinsburg et al. 1974, Krausman and Hervert 1983, Bleich et al. 1990, Gunn et al. 1985).

RESPONSES TO COMMENTS

Response to Comment No.38

Species-specific responses to low-altitude overflights vary considerably, and responses from individual animals may have the potential to cause injury. However, wildlife populations are usually affected only when a variety of stressors work in combination to impact the, including declines or fluctuations in the availability of a food source, habitat destruction or alteration, predation, hunting, trapping, poaching, disease, or inclement weather, rather than noise alone. Normally, it would be unrealistic to predict or attribute any wildlife population declines to a single stressor, such as noise. In addition, no published scientific evidence was identified that indicated harm may occur to wildlife as a result of exposure to the levels of noise generated by military aircraft that would utilize the airspace associated with the Colorado Airspace Initiative.

Response to Comment No.39

Comment noted. Additional analyses pertaining to this subject have been added to the EIS. See Subsection 4.6 in Volume I of the Final EIS.

Given this information, a better assessment of possible risks would seem to be that some of these problems could occur; they should at least be considered and discussed.

Little mention of impact avoidance

Much can be done to reduce the risk of negative impacts on sensitive species. Temporal and spatial avoidance of wildlife habitat would be relatively easy to implement into flight operations. The U.S. Fish and Wildlife Service, along with biologists from the Colorado Division of Wildlife, are requesting avoidance of ungulate wintering areas and production areas. This has been addressed only briefly in the DEIS but not fully explained, and there is no evidence that avoidance rules will be enforced. As noted in the correspondence with Colorado Division of Wildlife in the Appendix K, 8 months following the adoption of the Airburst Range environmental assessment, COANG and ANG have not entered the agreed-upon flight avoidance measures into the Flight Operations Program Manuals used by airspace managers. Will measures be taken to avoid overflights of sensitive areas, such as ungulate calving/lambing areas, waterfowl staging areas, and prairie chicken leks? 40

Another concern centers around the enforcement of flight avoidance procedures, once they are invoked. What corrective action will be taken for violations of flight regulations? Flight regulation violations are reportedly common over most MOAs and MTRs. Wildlife refuge managers across the nation, including Edwin B. Forsythe NWR in New Jersey, Hart Mountain NWR in Oregon, Cabeza Prieta NWR in Arizona, Desert National Wildlife Range which covers several mountain ranges, Witchita Mountains NWR in Oklahoma, and Harris Neck NWR are some of the refuges that report chronic problems with low-altitude overflights that are in clear violation of flight regulations. Refuge managers also report extreme frustration with attempts to resolve overflight problems; USAF personnel appear unwilling to take responsibility for misuse of airspace. All refuge managers report witnessed incidences of panic among animals subjected to low-level overflights. Many report incidences of disturbance with short-term consequences, such as loss of eggs or chicks to predators when birds flush from nests which are then predated by other birds. We must ask, are we simply adding to this problem by granting airspace to COANG over sensitive wildlife areas of Colorado? No mention of specific flight avoidance rules or measures to enforce them, are given in the DEIS. 41

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Response to Comment No.40

Several areas, including peregrine falcon nest sites, were identified by the U.S. Fish and Wildlife Service and the Colorado Division of Wildlife as being particularly sensitive to military aircraft noise. Avoidance measures for these areas were developed, further reducing any potential impacts that could be attributed to the noise generated by activities associated with the Colorado Airspace Initiative. A summary of these mitigation measures is presented in Section 4.18 in Volume I of the Final EIS.

Response to Comment No.41

The ANG takes the public's concerns about pilot accountability very seriously. Any misconduct by a military pilot is a serious matter. If a member of the public is experiencing any problems with the military's operations in any of the airspace in an area that affects a person directly, the public affairs officer at the nearest military installation should be contacted immediately, or call (800) 582-8507.

The Federal Aviation Administration and each military service have very strict rules to ensure pilots stay within defined training airspace. The rules govern minimum altitudes, maximum speed, and type maneuvers that can be performed inside and outside designated training airspace. Military commanders have the authority to suspend pilots who willfully violate flight rules, such as flying outside designated training airspace. The military closely manages the airspace they use to ensure they do not exceed planned parameters.

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A disregard for the concerns cited by regional biologists

Wildlife is a large component of the cumulative "resources" that will be impacted by expansion of MOAs and MTRs and associated flight activities of the Colorado Airspace Initiative. Yet the concerns by regional wildlife biologists are given virtually no weight in the impact analysis. Several letters by regional biologists cite concern for various populations under the ROI of several of the MOAs and MTRs, which appear to have been ignored. For example, a letter dated 8/31/93 from the Fish and Wildlife Service requests avoidance of Mexican spotted owl habitat and mentions that this species is easily preyed upon by raptors if they are spooked. Yet this is not mentioned as a possible impact.

We also refer to the letter dated September 14, 1993 from the Colorado Division of Wildlife which states that "Impacts to the environment resulting from this proposal are anticipated to be very significant" and "Numerous wildlife species will be negatively impacted." These statements are based on an analysis of overlays of wildlife distribution maps with airspace expansion maps for CAI. The letter continues with a list of 16 federal and 9 state T&E species that have habitat under the ROI, plus numerous raptor nesting areas, wintering and concentration areas for shorebirds and waterfowl, and production and wintering areas for elk, bighorn sheep and antelope. The CDOW states concern that animals will suffer from the "startle effect" which could lead to a variety of problems including interruption of mating, nest abandonment, spontaneous abortion, loss of young or injury to adults due to trampling during escape, interruption of feeding with loss of prey or lost feeding opportunity, increased susceptibility to disease due to stress, increase energy expenditures, and habitat abandonment.

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Most of these concerns are ignored in the DEIS. For those that are considered, the risk of occurrence is considered to be nil. What is the explanation for such a discrepancy between the views of biologists and the ANG on this subject? Wildlife biologists are experts in their field: their concern and their knowledge center around the health of populations of wild animals in their jurisdiction. It seems biased and arrogant to ignore the concerns of these experts.

For an analysis such as this, there should be specific information about how wildlife populations will be avoided. Yet there is no evidence of co-operation or dialogue between wildlife agencies and the ANG regarding the specifics of impact avoidance.

RESPONSES TO COMMENTS

Response to Comment No.42

The ANG is aware of concerns of some regional biologists and have utilized mitigation measures to take those into account. The studies the ANG has reviewed for this EIS indicate the mitigations would be appropriate. The ANG is not aware of any adverse trends on wildlife populations within Colorado that can be attributed to aircraft overflights, as overflights have taken place over a 25 year period of time. One could logically expect a noticeable trend if these flights were having an adverse impact. The ANG has no information from any agency showing this to be the case.

The ANG is funding work with the USFS to determine impacts, if any, that may be apparent from recently conducted overflights of several tagged owls. Results showed no reaction on the part of the birds other than head turning in some cases.

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Specific species of concern

The CAI proposes significant changes in current airspace and use over Colorado. Flight activities will greatly increase over a greater cumulative area, and there is a reduction in floor level for flights from 1500 to 300 feet AGL. Much of the changes involve addition of activities over critical habitat for wildlife and T&E species. As mentioned, there are 16 Federally-listed T&E species and 4 additional state-listed species with habitat under the MOA/MTR airspace. There are raptor nesting areas, waterfowl/shorebird wintering concentration and nesting areas, and production areas for sensitive ungulate species. Startle effects have been documented for many of these. Bird-strike hazards must be considered. To claim that absolutely no impacts are anticipated is senseless. -43

Mexican Spotted Owl

Habitat for the Mexican spotted owl is found in the La Veta and Airburst MOAs and MTR routes VR-413, IR-409, XIR-424, IR-415, and XVR. The U.S. Forest Service is currently studying the effects of military activities on the Mexican Spotted Owl, a federally-listed threatened species. This study covers owl habitat in La Veta and Fremont MOAs. It is improper to conclude that no impacts are expected to this species when even the primary results of this study are not yet available. The Mexican Spotted Owl is in jeopardy due to habitat losses and low population viability. Therefore, any activities that cause habitat avoidance or lower reproductive success for the Colorado population have severe consequences. Unfortunately, the nature of the terrain and expanse of wild land on which animals live makes it very hard to monitor populations and to detect harm. This is why it is so important to be pro-active and use our best judgment to avoid problems at the outset. If problems occur, it is likely that we will not detect them until it is too late. -44

Raptors- Peregrines, golden eagles and bald eagles

Ellis' study is used to support the argument that raptors will not be bothered by overflights. Yet this study exposed raptors to overflights above 1,000 feet AGL, whereas the floor for low-level flights is 300 feet. Ellis reports that adults generally were flushed from nests when overflights were below 1,000 feet. It should also be noted that birds are biologically

RESPONSES TO COMMENTS

Response to Comment No. 43

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No. 44

Comment noted. Additional analyses pertaining to this subject have been added to the EIS. See Subsection 4.6.

adapted not to flush from nests in response to danger; this is a way to protect eggs or young. Therefore adults may well be very stressed from overflights despite their tenacity.

Bighorn sheep

Pinon Canyon, La Veta, Airburst MOAs and MTR routes VR-413, XIR-424, and IR-415 all impact bighorn sheep lambing areas. There is evidence that overflights disturb bighorns during the critical lambing period. Specialists in bighorn sheep management that have experience with disturbance are concerned that overflights constitute harassment, high stress levels, winter range abandonment and abandonment of spring lambing areas. Bighorns are in their poorest condition in winter, and unnatural stresses can have a particularly negative effect at this time. Researchers are concerned that low-level overflights can cause stress that in turn results in poor lamb production, poor overwinter survival and a lowered capacity to resist parasites and respiratory disease, especially since bighorns are susceptible to large-scale die-offs. A study in Alberta, Canada showed that bighorns spent less time feeding and resting and more time engaged in disturbance-related behavior when human activities, including helicopter overflights, took place near by. Common sense suggests that low-flying F-16s will have a similar effect.

The Colorado population of bighorns is already subjected to chronic disturbance. This population exhibits the effects of stress-- susceptibility to lungworm parasites, poor condition, and die-offs. The addition of overflight disturbance could have a disastrous effect on this already-stressed population.

Lesser Prairie Chicken

The prairie chicken population will be subjected to 1868 sorties at 300 feet AGL in the Cheyenne MOA. It also resides under the SAC route IR-500 and IR177 and CAI route XIR-424. This species is at the fringe of its range in Colorado and so populations are of great concern to regional biologists. We know virtually nothing about how individuals of this species respond to aircraft disturbance. There may be problems with masking of mating sounds emitted during the breeding season. Lek behaviors could be disrupted. These potential problems should be mentioned in the DEIS.

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White pelican

White pelican habitat lies under CAI routes VR-413, IR-4-15 and XIR-424 as well as several SAC routes. Pelicans are particularly at risk of reproductive losses from disturbance because they are colonial nesters and because they panic and stampede in response to low-level overflights (Bunnell et al. 1981). Overflights can significantly increase egg mortality rates in rookeries; eggs are abandoned, predated, or displaced from nests when adults panic. Yet there is no mention of these consequences to this species in the DEIS. This seems like a large oversight since researchers have attributed low-flying aircraft as a major factor contributing to the decline in pelicans in British Columbia, where they are now considered endangered. A long-term study of a pelican population showed that the reproductive success of pelicans was seriously compromised when nesting adults panicked in response to one overflight in British Columbia (Bunnell et al. 1981). Clearly pelicans will be impacted by the addition of MTR routes, and this should be explained in the DEIS.

In conclusion, a species-by-species account of all possible impacts should be thoroughly and impartially explained, as is the objective of an environmental impact statement. Even when the risk of impacts cannot be calculated, the potential problems should still be described, with the admission that they could occur. Opening up a dialogue with wildlife biologists who have jurisdiction over the region would help to reduce the risk of disturbance to sensitive species. Documentation of such a dialogue in the final EIS would assure the reviewer that COANG will make a serious attempt to avoid disturbance to wildlife in the ROI. 45

RESPONSES TO COMMENTS

Response to Comment No.45

The ANG maintains a working relationship and communicates with biologists in the CDOW, USFWS, USFS, BLM, and Ft. Carson as part of the cooperative group formed in 1994. The group meets several times a year to discuss wildlife issues, primarily birds of prey.

FAEGRE & BENSON
PROFESSIONAL LIMITED LIABILITY PARTNERSHIP
2200 NORWEST CENTER, 90 SOUTH SEVENTH STREET
MINNEAPOLIS, MINNESOTA 55402-3901
TELEPHONE 612-336-3000
FACSIMILE 612-336-3026

MICHAEL A. PONTO
612/336-3389

July 11, 1996

VIA FEDERAL EXPRESS

Air National Guard Readiness Center
Program Manager, CAI-EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

Re: Draft Environmental Impact Statement for Colorado Airspace Initiative
Written Comments Submitted on Behalf of Custer County Action Association and Wolf Springs Ranches

Dear Sir or Madam:

On behalf of our clients Custer County Action Association ("CCAA") and Wolf Springs Ranches, we submit the following comments on the Draft Environmental Impact Statement for the Colorado Airspace Initiative Draft Environmental Impact Statement ("the DEIS"). These comments are being submitted based on the Air National Guard's representations that the original June 5, 1996 deadline for accepting public comments would be extended to July 12, 1996. CCAA and Wolf Springs Ranches remain concerned that this very limited extension is insufficient and does not allow all interested citizens time to comment fully upon the DEIS. 1

COMMENTS

1. Inadequate Noise Analysis

The most environmentally - troublesome aspect of the proposed action is the noise that would be associated with military flights. The analysis of noise and noise effects in the DEIS is superficial and unsatisfactory. This is true for several reasons:

a) Noise impacts are considered by using 24-hour day-night noise averaging. The settings in which these noise events will occur are extremely remote. Noise averaging inappropriately masks the disruptive effects these noise events will have in such 2

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RESPONSES TO COMMENTS

Response to Comment No.1

The Council on Environmental Quality provides guidelines for the preparation of Environmental Impact Statements, and the review of EISs by the public and various government agencies. These guidelines direct agencies to "allow not less than 45 days for comments on draft statements" (Section 1506.10 of these guidelines). The comment period for the CAI Draft EIS officially opened March 29, 1996 with the Notice of Availability published in the Federal Register. The initial mailing of the statement to over 750 addressees was accomplished on March 20, 1996 prior to the NOA. The close of the comment period was initially published as June 5, 1996 (68 days), and then extended to July 12, 1996 (105 days).

settings. It also fails to account for the fact that residents and visitors in such settings are likely to have heightened noise sensitivities. Recent National Park Service surveys, overlooked in the DEIS but readily available, prove -- for example -- that noise from overflights strongly and adversely affect the experiences of such persons. Some of the areas to be overflown include Federal Wilderness Areas -- designated for the very purpose of preserving opportunities for people to experience quietude and solitude. It is inappropriate, and even disingenuous, for the drafters of the DEIS to state, as they do, that some affected persons may find the noise of these military training exercises "thrilling." (DEIS 2.6.1) Such statements reveal a failure to understand, or even to identify, the actual communities affected by the proposed activities.

b) For the same reason that day-night noise averaging is not appropriate, it also is not appropriate to assume that a DNL value at or below 65dB will be acceptable. The areas studied are remote; manly people in those areas are present because of the solitude they offer. 3

c) Onset rate penalties are the only part of the Guard's noise analysis that even attempt to account for the suddenness and startle-effects of proposed noise events. Even these penalties, however, are arbitrarily capped at 5dB. 4

d) The noise analysis employed by the Guard fails to consider whether and how mountain terrain will impact noise effects under areas such as the LaVeta MOA. The final EIS must address the possibility such terrain may concentrate, and even magnify, noise impacts in certain areas. 5

e) The DEIS improperly employs noise averaging to "study" noise impacts on, wildlife. It concludes, for example, that Mexican Spotted Owls and other sensitive species within the LaVeta MOA would experience an L_{dnmr} value of 48dB. As the U.S. Fish and Wildlife Service has pointed out, the Mexican Spotted Owl, a federally-protected "Threatened" species, "is easily preyed upon by other raptors if it is 'spooked' from its roost. Should this happen, it is considered a 'take' under the ESA and punishable under that act." (DEIS, Appendix K, Letter to Ms. Christina Caro from LeRoy Carlson.) Noise averaging improperly masks the risk that sudden noise events might 'spook' protected owls and other wildlife. The final EIS must address that risk. Impacts on wildlife must be studied by looking at more than mere "average" noise levels. 6

(f) As a part of the EIS process, the Guard conducted flights over a bison herd. Such overflights were the only means by which the Guard even attempted to measure actual animal reactions to the proposed military training. But even these overflights were improperly conducted and their effects misinterpreted. Observations purportedly made at the time of these overflights are used to support the Guard's foregone conclusion that military training will have no significant effects on livestock. The overflights were carefully 7

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RESPONSES TO COMMENTS

Response to Comment No.2

Studies on how people react to noise indicate that the important factors are how loud the sounds are, how long each sound lasts, how many times a day they occur, and what hour of the day they occur. To provide a means to evaluate the relative impacts of the noise from a particular activity, the noise measurement approach (the metric) must be a tool that can account for all these factors. The EIS uses for this purpose the widely used and accepted noise metric called the Day-Night Average Sound Level (abbreviated as DNL or Ldn) which allows noise from many different situations to be compared with each other.

Although Ldn is called an "average," it represents the total sound occurring within a 24-hour period, and is often described as a "cumulative" measure of impact. It has been shown to properly account for individual loud events of the type that may occur with military aircraft operations. However, while Ldn measures the total effect of all events, it does not describe the sound level for individual events. Whereas the Draft EIS presented some descriptions of individual aircraft noise events, the Final EIS has been modified and now presents additional discussions of individual aircraft noise events and maximum sound levels that are useful to evaluate potential impacts.

Ldn still remains the primary noise metric for the assessment of potential impacts at various noise levels. Studies on noise impacts to communities have shown that to properly assess the impacts from a particular activity, it is important and useful to separate the way one individual may react to noise from the way the community, as a whole, reacts to this noise. Used in conjunction with an extensive existing body of research, the Ldn metric provides a means to accomplish this and to project a measure of the overall community reaction to aircraft noise levels associated with the Colorado Airspace Initiative.

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RESPONSES TO COMMENTS

Response to Comment No.3

The approach used in the EIS has been modified. The Federal Interagency Committee on Noise (FICON), representing a variety of Federal agencies with a mix of concerns associated with aircraft noise, reviewed aircraft noise analyses issues in 1992. This committee's report (FICON 1992) continued an approach to evaluating relative impacts associated with aircraft noise that has been recognized by noise analysis experts as the most widely endorsed and comprehensive approach to aircraft noise analysis available. This approach to noise analysis was incorporated into the analyses associated with the Draft EIS. In general, Federal land use compatibility criteria are derivatives of guidelines first devised for land near airports. All land use compatibility is based on the use of Day-Night Average Sound Level (abbreviated as DNL or Ldn) as the descriptor representing community noise environments. The criteria treat areas below DNL 65 dB as compatible for all uses, including residential, and they treat DNL 65 dB as a threshold for significant exposure. There is no generally accepted method for treating rural areas differently for these purposes.

However, many EIS reviewers, including some members of the Federal regulatory community, felt the application of the FICON standards, and the 65 dB threshold, to a rural setting was inappropriate for such areas with more quiet ambient noise conditions. Consequently, the use of the 65 dB threshold as the sole means to assess relative impacts or the acceptability of noise levels associated with aircraft operations addressed in the EIS has been modified and the analysis now includes additional information to evaluate potential impacts.

Response to Comment No.4

The correct onset rate penalty is up to 11 dB. The 5 dB specified in Appendix G has been corrected in the Final EIS to read 11 dB.

Response to Comment No.5

The noise models used account for all aircraft in the airspace. Valley walls and mountains can increase or decrease instantaneous noise levels. They do not increase the sound energy emitted from an aircraft, and therefore do not increase the cumulative noise exposure.

conducted to avoid public and scientific scrutiny. Those who did observe the overflights report they do not support the conclusions set forth in the DEIS

The overflights should have -- and were supposed to be -- conducted under public scrutiny. Instead, they were rescheduled at the last minute and conducted behind locked gates. The few people who were present to view the herds' reactions report that at the time of the overflights some of the bison were extremely agitated, with one yearling herd almost stampeding. No livestock experts or animal behaviorists were present to observe these reactions and look for other signs of stress. The DEIS does not accurately report the overflights, and dismisses evidence of overflight-induced herd stress.

Livestock overflights must be conducted anew, this time subject to appropriate public and scientific scrutiny. Results of those overflights should be reported fully and honestly. The Guard further should expand noise/overflight studies to explore the impacts of proposed training on other livestock and on area wildlife.

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2) **False "No Action" Alternative**

The purported "No Action Alternative" referred to throughout the DEIS is a misnomer. Under this alternative, the types of military aircraft used within existing military airspace, primarily F-16s, would not be the same as those which have been used in the past. Likewise, and as set forth in the DEIS, the types of training maneuvers these aircraft engage in are different than historically used and studied. It is inappropriate for the drafters of the DEIS to assume, as they do, that the impacts of future training -- using new aircraft and new maneuvers -- would be no different than the impacts of past training.

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Magnifying this problem, the purported baseline historical uses set forth for various airspace units do not coincide with actual airspace use in recent years. In fact, some airspaces, such as the La Veta MOA, have experienced far less use than suggested in the DEIS. This fact seriously undermines conclusions about the purported effects of a "no action alternative" as well as the effects of the Preferred Alternative and the Original Proposal, all of which would significantly increase airspace use over current actual levels.

3) **Violation of Wilderness Overflight Policy**

A Policy on Air National Guard Overflights of Designated Wilderness and Wild and Scenic River Areas specifically states that

> Newly proposed airspace and modification of existing airspace will be planned to avoid these areas unless mission constraints dictate otherwise.

RESPONSES TO COMMENTS

Response to Comment No.6

Studies conducted on wildlife have shown that numerous wildlife species have the ability to adapt to the presence of man and various man-made sound sources, including jet aircraft noise. While the noise generated from low-altitude military overflights may be initially startling, habituation to jet aircraft noise occurs with most wildlife species. Species-specific responses to low-altitude overflights vary considerably, and responses from individual animals may have the potential to cause injury. However, wildlife populations are usually affected only when a variety of factors work in combination to impact them, including declines or fluctuations in the availability of a food source, habitat destruction or alteration, predation, hunting, trapping, poaching, disease, or inclement weather, rather than noise alone. Normally, it would be unrealistic to predict or attribute any wildlife population declines to a single stressor, such as noise. In addition, no published scientific evidence was identified that indicated harm may occur to wildlife as a result of exposure to the levels of noise generated by military aircraft that would utilize the airspace associated with the Colorado Airspace Initiative.

Response to Comment No.7

The "Bison Study" presented in Appendix J was intended simply to observe the reactions of the bison to low-altitude F-16 overflights and to determine if a herd stampede was likely to occur. This observational study was accomplished at the request of certain members of the Citizen's Working Group. Members of this Working Group were invited to participate in the observations. In addition, several media representatives were present to observe the overflights. The observational study was never intended to evaluate other behavioral or physiological reactions of bison to aircraft overflights. The EIS authors relied on other existing published studies based on more detailed scientific methodologies to provide information on various other behavioral or physiological reactions of animals to aircraft noise.

Response to Comment No.8

The baseline sortie numbers, published in the Draft EIS for the No-Action Alternative, are representative of typical annual use of the La Veta MOA. For example, annual usage for La Veta MOA for 1994 was 985 sorties and in 1995 was 994 sorties. The low utilization from 1991 to 1993 was due to the 140 WG conversion from the A-7 to the F-16 aircraft.

All three of the alternatives studied entail training over designated Wilderness Areas. Yet neither the DEIS, nor any other documents, contain findings that "mission constraints dictate" such flights. Any such finding would be unsupportable. The Guard would be violating its own policy if it were to adopt any of the studied alternatives. 9, 10

Similarly, the same policy provides that

> The Operational and Resources Study (OARS) shall identify the rationale and provide justification for Wilderness and Wild and Scenic River Overflights. 11

This was not done. As previously pointed out, the Guard failed even to do an OARS for the Colorado Airspace Initiative, much less to address these specific issues.

4) Unavailability of Materials for Public Review

Appendix O of the DEIS is a bibliography of materials on issues studied and discussed in the DEIS. Affected citizens repeatedly have requested that these materials be made available for review prior to the comment deadline.

These materials have not been made available. The public's ability to comment is prejudiced by this failure.

Through informal communications, Guard representatives have informally explained to citizens' representatives that these bibliography materials were not released because the Guard's contractor never supplied any of them to the Guard. Representatives have further contended none of these materials were relied on in drafting the DEIS. If the bibliography materials were relied on in drafting the DEIS, they should be made available for further public comment prior to issuance of any final EIS. If they were not relied on, the bibliography is meaningless and should be deleted. 12

5) Failure to Identify and Study Proposed Mitigation

In the DEIS, the Guard repeatedly suggests it will mitigate possible impacts on sensitive areas and resources through "special operating procedures" and "avoidance measures." The public is entitled to know what procedures and measures are proposed to be used in what areas, and how those measures will be implemented and enforced (if at all). Furthermore the Guard has an obligation to consider the effectiveness of specific procedures avoidance measures in the context of this EIS. 13

RESPONSES TO COMMENTS

Response to Comment No.9

The ANG adheres to its "Policy on Air National Guard Overflights of Designated Wilderness and Wild and Scenic Rivers," as presented in Appendix L. This policy is intended to protect specifically identified areas, such as the Sangre de Cristo and Greenhorn Mountain Wilderness Areas, by limiting training operations to no lower than 2,000 feet above ground level whenever possible unless safety of the flight or operational parameters (e.g., weather conditions) may be compromised.

Response to Comment No.10

The use of other training areas was examined as part of the development of the alternatives studied in detail in the EIS in Subsection 2.3. The proposal was designed to minimize conflicts with potentially sensitive areas while providing the training resources necessary to meet military readiness requirements. Specific narrowing criteria for the selection of military training airspace (see Subsection 2.3.3 in Volume I) were used to evaluate other locations, and no alternative training areas were identified that could be substituted for the airspace configuration proposed in the alternatives studied in the EIS.

The primary user of the airspace included in the Colorado Airspace Initiative is the 140 WG based at Buckley Air National Guard Base in Aurora, Colorado. Because of limited resources and aeronautical constraints, virtually all of our nation's fighter units train in airspace that is within a "tank of gas" of the aircrews' base.

Response to Comment No.11

A draft Operations and Resources Study (OARS) for the Colorado Airspace Initiative was being developed to replace the Redeye Complex OARS/Description of Proposed Action and Alternatives (DOPAA). Upon review of a draft OARS for the Colorado Airspace Initiative, a decision to move directly to a DOPAA was made by the ANG. This DOPAA was used to initiate the Colorado Airspace Initiative.

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RESPONSES TO COMMENTS

Response to Comment No.12

The documents and various other items displayed in the Appendix O listing represent a compilation of potential source materials available to individuals working on preparing various resources area subsections of the Draft EIS. These items were collected during the initial field visits and data collection process, obtained as a result of agency coordination activities, received during scoping, obtained by the technical staff during the writing of the Draft EIS, or were existing in-house resources resident with the contractor staff.

A brief bibliographic-type entry for every item was input into a ProCite database and this listing was made available to the entire contractor technical staff. The documents inventoried in the listing included any item initially considered as a possible resource, such as textbooks, government publications, journal articles, brochures, maps, listings of data, records of personal communications, and various other items. For the purposes of the Appendix O listing, no attempt was made to verify the usefulness of any item, as this was left to each individual resource area author during the actual preparation of the EIS text. The listing simply served to inform the contractor staff of the existence of all the items collected or received that were associated with the project.

Each resource area subsection author studied the listing and reviewed those items he or she considered pertinent to the preparation of that author's subsection. Any item from the Appendix O listing that was determined to be relevant or appropriate to the preparation of the analyses contained in the Draft EIS is cited in the text by the subsection author and listed in Section 7 - References. Items not listed in Section 7 were not reference material used in the preparation of the Draft EIS. All materials listed in Section 7 are available for review by the public at the Canon City public library.

6) **Failure to Study Effect of Wilderness Overflights**

Along similar lines, the DEIS indicates that the Guard will remain at least 2000' AGL over Wilderness Areas when operational and safety parameters permit it to do so. The EIS should address the frequency of, and reasons for, flights under this discretionary 2000' floor, and needs to consider the impacts of such flights. Those issues are ignored in the DEIS.

7) **Unexplained Worst-Case Scenarios**

Worst case scenarios studied throughout the DEIS are based on purported maximum sorties. The final EIS should explain how these sortie numbers were derived and why they are considered "maximum." The Colorado Airspace Initiative itself does not limit the number or frequency of potential sorties. This is particularly troublesome given the admitted potential for this airspace to be used by other military units -- both U.S. and foreign -- other than the Colorado Air National Guard itself. 14

8) **Failure to Study Impacts of Use by Foreign Military**

The DEIS wholly fails to acknowledge inevitable use of Colorado airspace by foreign military forces. As the Air National Guard is aware, German forces now are permanently stationed at nearby Holloman Air Force Base in New Mexico. The Air National Guard has an obligation to inform Colorado citizens of the fact that German and other planes will train in areas of the Colorado Airspace Initiative. Equally importantly, the Air National Guard must study the impacts of such foreign training on Colorado citizens and the Colorado environment. Among the many particular issues that should be addressed are: the different types of aircraft likely to be used by foreign military; the expected and worst-case cumulative amount of American and foreign military activity within designated airspace; and the types of training activities that German and other foreign forces will engage in. 15

The Guard also has a responsibility to explain -- both to affected citizens and to the Federal Aviation Administration -- why U.S. airspace should be opened for foreign military practice unrelated to our own national defense needs. In that regard, why will Coloradans be exposed to overflights which the Germans themselves consider intolerable? Our own skies are no less crowded, and our own citizenry no more dispensable, than that of Germany or any other country.

9) **Failure to Assess Impacts of Accidents on Local Emergency Teams**

The drafters of the DEIS acknowledge that "[i]nitial response to an aircraft accident is the responsibility of the civilian authorities nearest the crash site." The DEIS improperly fails to consider whether such local officials have the training and equipment 16

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RESPONSES TO COMMENTS

Response to Comment No.13

Types of mitigation measures that have been identified for use by the ANG are given in Volume 1, Section 4.18. These measures apply to all the airspaces identified and are implemented as identified. These measures have been considered in context with the analyses performed for the EIS.

The ANG policy on wilderness overflights is to ensure that all flights be at 2,000 feet above designated Federal wilderness areas. Recognizing that safety factors could occur (i.e., low cloud cover), the exception was added. There is no past documentation available on how many times this type of occurrence has happened.

Response to Comment No.14

Cumulative sortie numbers were derived based on the maximum possible number of co-existing airspace use events, and are presented in detail in Appendix N. Because this is the maximum number of sorties possible for the airspace, this represents a worst case scenario.

Response to Comment No.15

There is no known or anticipated use of Colorado airspace by foreign nation aircraft at this time. If such use is identified, proper environmental documentation will be accomplished.

necessary to respond to potential accidents, especially in light of potential hazardous materials releases.

10) **Failure to Assess Cumulative Impacts of Military Airspace**

The U.S. Fish and Wildlife Service has emphasized its belief that the Guard needs to study "the cumulative impacts of all military flights within Colorado and not just those flights planned by this airspace initiative." (Appendix K, Letter from LeRoy Carlson to Msgt. Katherine Jones.) CCAA and Wolf Springs Ranches concur. Yet, by narrowly defining Regions of Impact, the Guard fails to consider true cumulative impacts of Colorado military airspace use. In this respect, the scope of the EIS needs to be broadened significantly. 17

11) **Failure to Consider Impacts on Eagles**

Although acknowledging eagles are present within the affected areas, the DEIS fails to consider possible violations of the Bald Eagle Protection Act of 1940 (BEPA), amended 16 U.S.C. §§ 668 et seq, or to address how such possible violations will be avoided. 18

12) **Use of Outdated Statics**

Population and population growth statistics used in examining socioeconomic impacts are outdated and therefore do not accurately represent current trends. More current information is readily available and should be used. 19

13) **Absence of Analysis Regarding Socioeconomic Impacts**

No examination or justification is offered for the apparently unstudied conclusion that no significant impacts to economic resources will result from the alternatives studied.

Particularly in the area underlying the LaVeta MOA, the potentials for decreased real estate values and decreased tourism are significant. The DEIS improperly glosses over these issues, providing past statistics but no analysis of the possible future effects of the alternatives studied. 20

14) **Failure to Study Alternatives**

Finally, the Air National Guard has failed to consider reasonable alternatives to the proposed new airspace. Repeatedly, both throughout the scoping process and during the study period, the Guard has been asked to consider alternatives which would use a new bombing range. From the issuance of its earliest proposals, the Colorado Air National Guard 21

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RESPONSES TO COMMENTS

Response to Comment No.16

Initial response to an aircraft accident is the responsibility of the civilian authorities nearest the crash site, who would provide emergency services such as fire, police, and medical assistance, as necessary. It is the responsibility of the civilian unit responding to an aircraft accident to determine what response actions they are capable of performing, including the evaluation of proper personnel training and response equipment. If the responding unit is not capable of performing certain response actions, they should request assistance from the nearest civilian unit capable of performing the required response. In the event of an aircraft accident, the nearest USAF installation would be notified by these authorities. In most cases, the nearest USAF installation would have been previously notified by the USAF unit associated with the downed aircraft. Upon notification of the aircraft accident, the commanding officer of the nearest USAF installation dispatches a Disaster Response Force. The Disaster Response Force includes personnel who have been trained to respond to this type of occurrence, and would include disaster preparedness, security police, medical, fire department, legal, munitions, mortuary, and others as required. The Disaster Response Force would assist local response teams in matters of fire suppression, site security, medical treatment and evacuation, accident evaluation and investigation, retrieval of classified materials or equipment, and protective measures, such as munitions disposal and hazardous/toxic materials protective measures. When necessary, the Disaster Response Force would coordinate activities with other regional response forces to ensure all personnel and equipment are obtained for proper mitigation and control of the accident site. It is the ANG policy to provide training, upon request, on aircraft accident emergency response to any recognized emergency response agency.

Response to Comment No.17

See response to Comment No. 14.

has admitted that the present Airburst bombing range will not serve long-term needs and will have to be replaced. The Guard fails to address this problem anywhere in the DEIS. 22

Thank you for your consideration of these issues. I request that these comments be made a part of the agency's record in this matter and expect that they will.

Very truly yours,

Michael A. Ponto

Michael A. Ponto

MAP:ncm
cc: Senator Ben Nighthorse Campbell
Senator Hank Brown
Honorable Wayne Allard
Honorable Joel Hefley
Honorable Scott McInnis
Rep. Dan Schaefer
Rep. Patricia Schroeder
Rep. David Skaggs
Governor Roy Romer

M1:0156252.01

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RESPONSES TO COMMENTS

Response to Comment No.18

Consultation with the U.S. Fish and Wildlife Service (USFWS) addressed the potential impacts of the CAI to federally-listed threatened and endangered species within the region of influence. The results of the consultation process are summarized in Appendix Q of Volume II. The use of mitigation measures designed to reduce potential impacts to specific listed species, including the bald eagle (Haliaeetus luecocephalus), makes it unlikely that the Preferred Alternative would adversely affect listed species or their habitat. Specifically, seasonal avoidance measures for known bald eagle nest site locations have been established. This satisfies the requirements of both Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) as amended (16 U.S.C. 1531-1543) and the Bald Eagle Protection Act (16 U.S.C. 668-668d). See Subsection 4.6.1.3.4 and Appendix Q for information pertaining to the USFWS consultations and resulting mitigation measures.

Response to Comment No.19

Demographic data for the CAI EIS were collected in 1993 and 1994. Therefore, population figures beyond this time period for the entire study were not then available from the U.S. Department of Commerce. Additionally, 1990 and 1970 data were selected in order to correspond to other available socioeconomic data, housing figures in particular, that are presented in the CAI EIS. Since the time when data were initially collected, more current population information has become available.

Response to Comment No.20

A discussion of potential socioeconomic impacts is detailed in Subsection 4.9 of the EIS. The finding of no significant impact is based on the fact that : military aircraft operations have been occurring in the study area for approximately 20 years; proposed airspace configurations would occur in predominantly the same area as existing conditions (I.e., the No-Action alternative); none of the alternatives would relocate personnel into, or out of, the areas underlying the airspace (I.e., no gain or loss of jobs or change in employment); and no military facilities would be constructed in the areas underlying the airspace (i.e., no change in construction industry earnings.)

In order to address concerns regarding possible devaluation of real estate, the EIS evaluated historical data for property values. This analysis compares counties within the study area for the CAI, including those areas with currently utilized military airspace, to counties outside the study area. The results indicate that all counties experienced increases in property values. Further, in terms of median property values, counties within the study area for the CAI increased 99.71 percent compared to counties outside the study area, which increased 57.74 percent. Whereas a report published by the Federal Aviation Administration concludes "that noise has been shown to decrease the value of property by only a small amount--approximately 1 percent decrease per decibel (DNL)," this analysis applies to airport/airfield environments and not land areas underlying military airspace. Therefore, although it is not possible to absolutely conclude that counties experiencing military aircraft overflights incur any greater change in real estate values than counties not experiencing similar overflight activity, it is not likely that real estate values would drop as a result of the CAI.

The role of tourism in the local economy, and its impact from the alternatives associated with the CAI, have been studied in the EIS as a part of the evaluation of socioeconomic impacts. There are a number of factors, other than aircraft operations, that may affect tourism and the use of recreational areas, including weather, the proximity of other attractions in the area, and the economy. While it is possible that a tourist visiting an area may find an aircraft overflight to be annoying, no significant change to the tourist industry would be expected considering the fact that the majority of the CAI airspace has existed for many years and the relevant influences from military aircraft operations are not changing in the study area. The contribution of tourism earnings to total industry earnings was presented in the EIS for each

airspace. In all instances, these values were very consistent with overall state levels of tourism earnings as compared to industry earnings.

Under the NEPA, agencies are required to use existing information and data in order to describe baseline (I.e., existing) conditions and assess potential impacts to those conditions under reasonable alternative. Therefore, socioeconomic resources are based on historical data.

Response to Comment No.21

The use of other training areas was examined as part of the development of the alternatives studied in detail in the EIS in Subsection 2.3. The proposal was designed to minimize conflicts with potentially sensitive areas while providing the training resources necessary to meet military readiness requirements. Specific narrowing criteria for the selection of military training airspace (see Subsection 2.3.3 in Volume I) were used to evaluate other locations, and no alternative training areas were identified that could be substituted for the airspace configuration proposed in the alternatives studied in the EIS.

The primary user of the airspace included in the Colorado Airspace Initiative is the 140 WG based at Buckley Air National Guard Base in Aurora, Colorado. Because of limited resources and aeronautical constraints, virtually all of our nation's fighter units train in airspace that is within a "tank of gas" of the aircrews' base.

Response to Comment No.22

At this time, there are no issues that would lead to the immediate closing or reduction in use of the Airburst Range.

Michael Reshetnik
1804 Del Rosa Ct.
Boulder, CO 80304
July 11, 1996

Att'n.: Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

Dear Sirs,

I am writing to object to implementation of the Colorado Airspace Initiative. I have read the executive summary of the Draft Environmental Impact Statement, and several documents analyzing the DEIS. The need for more intensive flight training over the Huerfano Valley is not convincingly established, and the adverse effects are minimized in the DEIS. 1

The peaceful and pristine character of this area is severely threatened. Though a resident of Boulder County, I have a strong connection with this part of Southern Colorado because it is a superbly suitable place for religious retreats and meditation practice. My church would be deprived of its traditional solitary retreat center if low altitude training flights are scaled up. The disruption of this increased activity would be intolerable. 2

Many other citizens have strong and valid reasons (economic, environmental, etc.) that should take precedence over questionable military logic in a time when America's air superiority is not significantly threatened. Please, no increases in military operations over the Huerfano Valley! 3

Thank you.

Sincerely,

Michael Reshetnik

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RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

The EIS has evaluated cultural resources, such as historic or Native American sites, by consulting with the appropriate state representatives and local experts to obtain an understanding of the resources present in the study area and to determine whether any possible impacts exist. Some religious and/or meditation centers are under existing airspace. Consequently, the elimination of VR-412 and the changes to VR-413 under the Preferred Alternative, which raises the minimum altitude from surface level to 500 feet above ground level and reduces the route width from 12 miles to 6 miles, should be beneficial to such locations.

Response to Comment No.3

The CAI was initiated several years ago with an Original Proposal that did include some low-altitude flights in the areas identified. However, the ANG identified a new Preferred Alternative in the Draft EIS. This Preferred Alternative was the culmination of efforts by Governor Roy Romer, members of the Colorado Congressional delegation, a Citizens' Working Group, and the ANG to reach a viable alternative which addressed the concerns of the citizens of Colorado.

This Preferred Alternative does not include new or lower flights in the vicinity of the Wet Mountain Valley or the Sangre de Cristo eastern slope. In fact, La Veta MOA will remain as currently charted (minimum altitude 13,000 ft. MSL) but with fewer flights. A military training route, VR-412, which is currently charted through the Wet Mountain Valley, will be totally eliminated. Rather than increasing the training activities in the area, training would be reduced. Low-altitude flights in the Wet Mountain Valley, using either MOAs or MTRs, would be completely eliminated by this proposal.

Colorado State University

Department of Fishery and Wildlife Biology
Fort Collins, Colorado 80523
(303) 491-5020
FAX (303) 491-5091

11 July 1996

Air National Guard Readiness Center
Program Manager, CAI EIS
ANGR/CEVP
3500 Fetchet Avenue
Andrews Air Force Base, MD 20762-5157

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Gentlemen:

Following are my comments on Draft EIS for the Colorado Airspace Initiative, particularly VR-413, Pts. D to E:

This passes over colonies of nesting White-faced Ibises, Snowy Egrets, and Black-crowned Night-Herons, which are sensitive to overflights of low-flying jets. Back in the '80s I witnessed such a response in a large colony (>75 pairs of birds) when a flighter plane flew over low. It passed beyond the birds before they flew up in confusion.

Besides the disturbance to these species of special concern, the birds are a safety hazard to any planes that might follow along the route after an earlier plane first flushed the birds. 1

If possible, flights along VR-413 should be restricted so they do not occur during the normal nesting season, which is mid-April to mid-July.

Thank you.

Ronald A. Ryder
Professor Emeritus of
Wildlife Biology

RESPONSES TO COMMENTS

Response to Comment No.1

Because of the potential for loss of a pilot's life and the high cost of modern military aircraft, avoidance of collisions with birds is extremely important to the ANG. The potential for a bird-aircraft strike would not change significantly under the proposal. Both the Original Proposal Alternative and the Preferred Alternative consist largely of modifications to existing airspace or establishments of new airspace in the vicinity of existing airspace. These actions would, therefore, encompass the same seasonally adjusted bird avoidance procedures associated with the bird migration corridors as are utilized currently with the existing airspace. Due to the fact that only four bird strikes have occurred in existing airspace associated with the Colorado Airspace Initiative in the past five years, the likelihood of future bird-aircraft strikes under any of the alternatives would be expected to be low.

The USAF has established a Bird/Aircraft Strike Hazard (BASH) Team to implement procedures to prevent and reduce the threat of bird/aircraft strikes, and to investigate and track any bird strikes that occur. In addition, each USAF/ANG base or flying unit is required to establish a BASH program to minimize the risk of bird strikes both at the base airfield and in airspace training routes for the unit. The USAF BASH Team assists each base or flying unit by providing Bird Avoidance Model (BAM) graphs. These graphs estimate the relative bird strike risk for flying along a specific low-level route or operations area. The model is developed on the basis of waterfowl and raptor migration and concentration data. The BAM graph depicts the severity of the bird strike hazard at a particular time of day, month, and segment of a low-level route. This information is used by the flying unit to determine the optimum route schedule and avoidance measures to be taken to prevent bird/aircraft strikes. In addition, the unit publishes Notices to Airmen (NOTAM) to alert transient aircrews to specific bird migration hazards, activity periods, and avoidance procedures.

Mark Turnoy
1804 Del Rosa Ct.
Boulder, CO 80304
July 11, 1996

Att'n.: Program Manager, CAI EIS
ANGRC/CEVP
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

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Many other citizens have strong and valid reasons (economic, environmental, etc.) that should take precedence over questionable military logic in a time when America's air superiority is not significantly threatened. Please, no increases in military operations over the Huerfano Valley! 3

Thank you.

Sincerely,

Mark Turnoy

Mark Turnoy

cc: Paul Gallant - FAA
Custer County Action Association

*U.S. Government Printing Office: 1997 - 429-286

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RESPONSES TO COMMENTS

Response to Comment No.1

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

Response to Comment No.2

The EIS has evaluated cultural resources, such as historic or Native American sites, by consulting with the appropriate state representatives and local experts to obtain an understanding of the resources present in the study area and to determine whether any possible impacts exist. Some religious and/or meditation centers are under existing airspace. Consequently, the elimination of VR-412 and the changes to VR-413 under the Preferred Alternative, which raises the minimum altitude from surface level to 500 feet above ground level and reduces the route width from 12 miles to 6 miles, should be beneficial to such locations.

Response to Comment No.3

Comment noted (see Section 6 in Volume I concerning incorporation of public comments).

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